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Page No.	Change No.	Page No.	Change No.
Title page, A	2	3D-1 to 3D-5/3D-6	1
B	2	3E-1 to 3E-3/3E-4	1
i	1	4-1 to 4-4	0
ii to vii	0	4-5 to 4-8	1
viii to xi	1	4-9, 4-10	0
xii, xiii	0	4-11, 4-12	1
xiv, xv	1	4-13 to 4-75/4-76	0
1-1	0	4A-1 to 4A-3/4A-4	0
1-2 to 1-5	2	4A1-1	0
1-6 to 1-13/1-14	0	4A1-2 to 4A1-3	2
1A-1 to 1A-5/1A-6	0	4A1-4 to 4A1-7/4A1-8	0
1B-1 to 1B-7/1B-8	0	4A2-1 to 4A2-5/4A2-6	0
1C-1 to 1C-3	0	4A3-1 to 4A3-3/4A3-4	0
1C-4 to 1C-5/1C-6	2	4A4-1 to 4A4-5/4A4-6	0
1D-1 to 1D-5/1D-6	0	4A5-1 to 4A5-3/4A5-4	0
1E-1 to 1E-3/1E-4	0	4A6-1 to 4A6-3/4A6-4	0
1F-1 to 1F-3/1F-4	0	4A7-1 to 4A7-3/4A7-4	0
1G-1 to 1G-5/1G-6	0	4A8-1 to 4A8-3/4A8-4	0
2-1 to 2-39/2-40	0	4A9-1 to 4A9-3/4A9-4	0
3-1, 3-2	0	413-11 to 413-7/413-8	0
3-3 to 3-8	1	4C-1 to 4C-7/4C-8	0
3-9 to 3-29	0	4D-1 to 4D-5/4D-6	0
3-30 to 3-49/3-50	1	5-1 to 5-9/5-10	0
3A-1/3A-2	0	6-1 to 6-17/6-18	0
313-1/313-2	0	7-1 to 7-27/7-28	0
3C-1 to 3C-3/3C-4	1		

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PREFACE

GENERAL

1. B-GL-301-002/FP-001, The Battle Group in Operations, is issued on the authority of the Chief of the Defence Staff. With Supplement 1, the Combat Team Commander's Handbook, it provides Canadian army doctrine for the combined arms team.

2. Suggestions for amendment should be forwarded through command channels to the Secretary of the Army Doctrine and Tactics Board.

AIM

3. The aim of this manual is to provide the battle group tactical doctrine.

SCOPE

4. It considers battle group and combat team tactics in all types of operations. Its primary focus is the fighting of tank and infantry battle groups in central Europe. All organizations are modelled on Corps '86.

CONTEXT

5. The Army, and Land Formations in Battle, provide the higher level doctrine on which this manual is based. This manual provides the basis for all branch level doctrine related to combined arms tactics. Branch manuals will eventually be revised so that they are in full agreement with this manual.

TERMINOLOGY

6. The terminology used in this publication is consistent with Staff Duties in the Field Supplement 3, Army Glossary, and AAP-6, NATO Glossary of Terms and Definitions.

STANDARDIZATION AGREEMENTS

7. The NATO and ABCA agreements contained, wholly or partially, in this manual are:

   a. NATO (STANAG) -

      (1) 2002 - Warning Signs for Contaminated Areas,

      (2) 2003 - Patrol Reports,

      (3) 2008 - Bombing, Shelling, Mortaring and Location Reports,

      (4) 2011 - Target Grid Procedure,

(5) 2017 - Orders for Demolition,

(6) 2044 - Procedures for Dealing with Prisoners of War,

(7) 2047 - Emergency Alarms of Hazard or Attack (NBC and Air Attack only),

(8) 2088 - Battlefield Illumination,

(9) 2099 - Fire Co-ordination in Support of Land Forces,

(10) 2101 - Establishing Liaison,

(11) 2395 - Water Crossing Procedures (not yet published),

(12) 2962 - Call For Fire Procedures,

(13) Levels of NBC Threat and Minimum Protection;

b. ABCA (QSTAG) -

(1) 239 - Infantry/Tank Indication,

(2) 567 - Command and Control of Infantry Battalion Anti-Armour Weapons.

RECORD OF CHANGES

Identification of Change		Date Entered	Signature
Ch No.	Date		

TABLE OF CONTENTS

CHAPTER 1 - INTRODUCTION

Section 1 - General

101 Threat
102 Principles of War
103 Phases of War

Section 2 - Battle Group Composition

104 General
105 Components
106 Roles, Tasks and Tactical Employment of Arms

Section 3 - Battle Group Administration

107 General
108 Battle Group Echelon System
109 Role, Tasks and Command and Control of Administrative Elements
110 Fundamentals
111 to 199: Not allocated

Annex A - Artillery
Annex B - Armour
Annex C - Infantry
Annex D - Engineers
Annex E - Signals
Annex F - Tactical Aviation
Annex G - Administration

CHAPTER 2 - COMMAND AND CONTROL

Section 1 - General

201 Fundamentals
202 Relationships
203 Standing Operating Procedures (SOPs)
204 Control Measures

Section 2 - The Commander

205 General
206 Responsibilities
207 Location of the Commander

Section 3 - Headquarters

208 Functions
209 Organization
210 Operation

Section 4 - Communications

211 Radio
212 Liaison

Section 5 - Battle Procedure

213 General
214 Organization
215 Sequence of Battle Procedure
216 Details of Battle Procedure

Section 6 - Fire Planning

217 General
218 Fire Planning Responsibilities
219 Fundamentals of Fire Planning
220 Fire Planning Terminology and Definitions
221 Allotment of Artillery Fire Support
222 Fire Planning Process
223 Co-ordination Measures
224 to 299: Not allocated

CHAPTER 3 - OFFENSIVE OPERATIONS

Section 1 - Introduction

301 General
302 Principles of War
303 Threat
304 Forms of Manoeuvre
305 Fire Planning
306 Continuous Fire Support
307 Planning the Use of Smoke

Section 2 - Advance to Contact

308 General
309 Fundamentals

310 Organization
311 Forces and Tasks
312 Estimate
313 Manoeuvre
314 Action on Contact
315 Advance to Contact in Conditions of Reduced Visibility
316 Meeting Engagement

Section 3 - Attack

317 General
318 Types of Attack
319 Concept
320 Stages of the Attack
321 Planning
322 Reduced Visibility
323 Infiltration
324 Attacks in Built-Up Areas

Section 4 - Pursuit

326 General
327 Planning
328 Conduct
329 Administration
330 to 399: Not allocated

Annex A - To be published
Annex B - To be published
Annex C - Coordination of Attack
Annex D - Fire Support Planning Guide
Annex E - Control Measures for Attack

CHAPTER 4 - DEFENSIVE OPERATIONS

Section 1 - Introduction

401 General
402 Principles of War and Tactics
403 Threat

Section 2 - Defence

404 General
405 The Nature of Defensive Operations
406 Covering Force Stage

407 Main Defensive Stage Planning
408 Main Defensive Stage Conduct
409 Countermoves Stage
410 Administration

Section 3 - Delay

411 General
412 Principles of War and Tactics
413 Concept
414 Formation Commander's Direction
415 Planning Factors
416 Conduct
417 Methods of Delay
418 Command and Control
419 Administration

Section 4 - Withdrawal

420 Introduction
421 Principles of War
422 Concept
423 Formation Commander's Direction
424 Day and Night Withdrawals
425 Withdrawal Plan
426 Conduct
427 Hasty Withdrawal
428 Action on Encirclement
429 Administration
430 to 499: Not allocated

Annex A - Supporting Plans

Appendix 1 - Anti-Armour Plan
Appendix 2 - Barrier Plan
Appendix 3 - Defensive Fire (DF) Plan
Appendix 4 - Surveillance and Target Acquisition Plan
Appendix 5 - Countermoves Plan
Appendix 6 - Air Defence Plan
Appendix 7 - Electronic Warfare (EW) Plan
Appendix 8 - Security Plan
Appendix 9 - Administrative Plan

Annex B - Defence in Conditions of Reduced Visibility
Annex C - Defence of Built-Up Areas (FIBUA)
Annex D - Defence in Forests

CHAPTER 5 - PASSAGE OF LINES

501 General
502 Control and Co-ordination Considerations
503 Forward Passage of Lines
504 Rearward Passage of Lines
505 to 599: Not allocated

CHAPTER 6 - RELIEF

Section 1 - Introduction

601 General
602 Relief in Place
603 Principles

Section 2 - Planning

604 Formation Commander's Directions
605 Preparation and Planning

Section 3 - Conduct

606 General
607 Command and Control
608 to 699: Not allocated

CHAPTER 7 - OPERATIONS IN NBC ENVIRONMENT

Section 1 - Introduction

701 General
702 Threat
703 Command and Control

Section 2 - Approach to NBC Defence

704 General
705 Decontamination Operations

Section 3 - Concept of Operations

706 Options Open to the Battle Group Commander
707 Impact on Personnel

Section 4 - Planning

708 Planning
709 Factors to be Considered

Section 5 - Conduct

710 General
711 CW Threat Versus Protection
712 Reporting and Warning
713 Defensive Measures to be Taken by the Battle Group Commander
714 Decontamination Equipment

Section 6 - Administration

715 Administrative Points to Consider

Section 7 - Conclusion

716 Nuclear and Biological
717 to 799: Not allocated

LIST OF FIGURES

FIGURE	TITLE
2-1	Control Measures
2-2	Surface Fire Co-ordination Measures
3-1	Fantasian Company Defensive Position
3-2	Battle Group Form of Manoeuvre
3-3	Formation Advance to Contact
3-4	Examples of Infantry Heavy and Armour Heavy Battle Groups Employed in the Advanced Guard
3-5	Tank/Infantry Manoeuvre During the Assault
3-6	Battle Group Attack in a Town
4-1	Fantasian Regimental Attack
4-2	Side View of Reverse Slope Position
4-3	General Plan for the Defence
4-4	Battle Group Delaying on Successive Positions
4-5	Battle Group Delaying on Alternate Positions
4-6	Battle Group Withdrawal Plan
4A1-1	Range Coverage of Anti-Armour Resources
4C-1	Battle Group Defence of a Built-Up Area
6-1	Battle Group Relief in Place

LIST OF TABLES

TABLE	TITLE
2-1	Comparison of Command and Control Relationships
2-2	Typical Composition of R and O Groups
2-3	Typical Battle Procedure Sequence
7-1	TOPP Levels
7-2	Decontamination Equipment

CHAPTER 1

INTRODUCTION

CHAPTER 1

INTRODUCTION

SECTION 1

GENERAL

101. THREAT

1. Fantasian doctrine is predicated on the primacy of the offence. To this end, large standing army, air and naval forces are maintained for a rapid transition to wartime status.

2. Their doctrine is characterized by several key principles or concepts:

   a. **Surprise**. At all levels of command, surprise is important to achieve a rapid collapse of the enemy's defence. Surprise is accomplished in a number of ways -

      (1) Create false radio traffic, dummy assembly areas, and loudspeaker units.

      (2) Select slower and more difficult routes over the obvious high-speed ones that are heavily defended.

      (3) Introduce new equipment, especially weapons not previously known to the enemy.

      (4) Use new tactics not previously known to the enemy.

   b. **Speed and Momentum**. These are derived from aggressive reconnaissance, extensive fire and engineer support, and the echelon system.

   c. **Concentration of Force**. The advance is conducted on a broad front but the battle at the FEBA is not fought with the same intensity all along the front. Forces are concentrated at the selected time and place to achieve penetrations. The attack is characterized by a series of deep, narrow penetrations interposed with areas of little or no enemy activity.

   d. **Asymmetrical Development**. The attack destroys the cohesion of the defence by driving deep wedges in the FEBA, not by rolling it back. The use of aviation at formation and unit levels is stressed. The aim is to destroy the cohesion and the command facilities of the defending forces.

3. **Types of War**. Fantasia is prepared to wage any type of war - from conventional to all out nuclear exchange. Nuclear, chemical, and biological munitions are classified by Fantasia as Weapons of Mass Destruction. Chemical warfare is not considered an intermediate stage between

conventional and nuclear war. Chemical weapons are not likely to be used prior to nuclear ones. However, once release authority for weapons of mass destruction is given, it is expected that chemical weapons will be used on a large scale. Initially, release authority is retained at the highest political level. Once released, use is delegated to field commanders.

4. **Concepts**. To achieve the rapid defeat of the enemy Fantasia continues to improve operational and tactical concepts and organizations. These include:

a. **Operational Manoeuvre Group (OMG)**. The concept of the OMG, which is based on World War II Mobile Groups, has been revitalized. The OMG is formed from Army or Front resources and varies in size from a brigade to an army. They are task-tailored with the mission of achieving a deep rapid penetration, to destroy cohesion and disrupt command and control.

b. **Air Operations**. Fantasia is placing increasing emphasis on the air space over the battlefield through the use of airborne, air-assault and airmobile operations at Front, Army, and Division levels respectively. Fantasia is relying increasingly on rotary, and fixed-wing aircraft at the tactical level for both the close air support and transport missions.

c. **Command and Control**. Continuing improvements to command and control are apparent. In particular, Fantasia is attempting to develop systems which will integrate more closely and quickly target acquisition/ intelligence collection systems with weapons. As well, they appear to be adopting and utilizing technologically sophisticated communications and weapon systems. Their equipment can no longer be characterized as just rugged and simple.

102. PRINCIPLES OF WAR

1. The Principles of War are described in the manual, The Army. They are:

a. Selection and Maintenance of the Aim;

b. Maintenance of Morale;

c. Offensive Action;

d. Security;

e. Surprise;

f. Concentration of Force;

g. Economy of Effort;

h. Flexibility;

j. Co-operation; and

k. Administration.

2. The Principles of War apply to the battle group as they do to each platoon/troop and higher formation. To exploit fully the fighting potential of the combined arms team, commanders are guided wisely by these principles. The situation dictates the relative importance of each principle and in some cases commanders need to adhere more stringently to some principles, at the expense of others. Their challenge is to know where to place the emphasis at any given moment.

103. PHASES OF WAR

1. The battle group participates in all phases of war. Grouped under the two main operations of warfare, offensive and defensive, the phases are:

a. **Offensive operations -**

(1) the advance to contact,

(2) the attack, and

(3) the pursuit; and

b. **Defensive operations -**

(1) the defence,

(2) the delay, and

(3) the withdrawal.

2. Battle group tactics in all phases of war are discussed in detail in the following chapters.

SECTION 2

BATTLE GROUP COMPOSITION

104. GENERAL

1. Battle groups are the tactical manoeuvre units of the formation. They are normally part of the brigade. They may, however, be placed under the command of division for specific tasks, but this is usually an exceptional or temporary measure.

2. **Definition**. A battle group is an operational grouping based on either an infantry battalion or armoured regiment, each with at least a squadron or company of the other arm. Elements of other arms and services may be allocated according to need.

3. Battle groups may be infantry or armour heavy and are defined as such by the predominance of infantry or armour in the battle group. Their composition, dictated by the formation commander, varies according to tasks, resources available, ground, conditions of visibility, weather, areas of operations and the threat. Battle groups combine firepower, mobility, protection, flexibility and communications in a combined arms force that is capable of fighting in all but the most difficult conditions of terrain and climate.

105. COMPONENTS

1. Battle groups may include all or some of the following elements:

   a. between three and five mechanized infantry companies or tank squadrons;

   b. formation anti-armour elements;

   c. a field engineer troop and/or armoured engineer troop;

   d. a close support artillery battery, in direct support;

   e. low level air defence (LLAD) and very low level air (VLLAD) defence elements;

   f. administrative elements of attached arms;

   g. administrative elements attached from brigade or division for special requirements including -

      (1) medical evacuation platoons or sections,

      (2) transportation elements, and

    (3) maintenance, repair and recovery teams, and

h. more infrequently for specific requirements or tasks -

    (1) additional signal elements, and

    (2) aviation elements.

106. ROLES, TASKS AND TACTICAL EMPLOYMENT OF ARMS

1. Battle group commanders must understand the roles, tasks and tactical employment of all arms and services in order to exploit their full potential. Roles, tasks and tactical employment of the various arms and services in the battle group are described in Annexes A to G.

SECTION 3

BATTLE GROUP ADMINISTRATION

107. GENERAL

1. The fundamentals and principles for effective administration at unit level are described in detail in the manual Unit Administration. Unit replenishment and administration systems are explained in the Branch manuals of the major arms components of the battle group ie, The Infantry Battalion in Battle and The Tank Regiment in Battle. This manual explains combat service support (CSS) aspects that are particular to the battle group.

108. BATTLE GROUP ECHELON SYSTEM

1. The battle group is organized into echelons to gain a degree of protection and survivability from dispersion while maintaining adequate control. The administrative support of the battle group, located in the echelons, is similar to that provided by unit first line elements. These echelons are:

   a. **F Echelon**. This consists of the men, weapons and vehicles required for the fighting the immediate battle. In principle, this echelon should be fully topped-up before engaging in battle.

   b. **A Echelon**. This consists of the men, weapons and vehicles required to support F echelon. A echelon may be further sub-divided into:

      (1) **Company/Squadron A1 Echelon**. This includes the men, vehicles, equipment and medical resources required for the immediate resupply, repair and maintenance of F echelon. It normally operates under the command of a sub-unit commander but may be centralized at battle group, located one or two tactical bounds behind the F echelon.

      (2) **Battle Group A2 Echelon**. This includes the balance of men, vehicles, equipment and medical resources required forward for the day-to-day resupply, repair and maintenance of the F echelon. This echelon normally operates under battle group command.

   c. **B Echelon**. This includes the men, vehicles and equipment not included in the F or A echelons but required for the routine administration of the unit. It is normally located in the Brigade Administrative Area (BAA) under command for movement and defence of the Service Battalion.

109. ROLE, TASKS AND COMMAND AND CONTROL OF ADMINISTRATIVE ELEMENTS

1. These are discussed in Annex G.

110. FUNDAMENTALS

1. The ability of its administrative echelons to support the battle group effectively depends on:

   a. **Timely Information and Planning**. Battle group headquarters warns the echelon commander as soon as possible of future operations and keeps him informed of the current situation and developments to permit operational and administrative planning to take place concurrently. The echelon commander and his subordinates follow the battle and anticipate likely requirements. While administrative SOPs provide for routine requirements they do not replace administrative planning and support that is unique to different operations.

   b. **Survivability**. Echelon commanders and troops must never, in their preoccupation with administrative tasks, ignore the battle. They must be sited with protection or self-defence in mind. Tactical awareness and sound battle discipline and drills are essential if they are to survive and carry out their tasks.

(111 to 199: Not allocated)

ANNEX A, CHAPTER 1

ARTILLERY

ARTILLERY

FIELD ARTILLERY

1. **Role**. Field artillery contributes to the defeat of the enemy by indirect fire.

2. Artillery provides various types of fire support:

   a. close support;

   b. attrition;

   c. interdiction; and

   d. counterbattery; and also performs -

      (1) co-ordination; and

      (2) target acquisition.

3. At battle group level the main tasks of artillery are close support and co-ordination:

   a. **Close Support** is the timely, intimate, fire support provided to the battle group. It may include the provision of advice, observation, liaison and communications.

   b. **Co-ordination** of all sources of indirect fire support is a responsibility of the artillery commander.

A close support battery is normally in direct support of a battle group. The battery commander's party at battle group HQ and the forward observation officer (FOO) with the combat team are the most visible aspect of this support.

4. The battle group benefits from the fire of general support artillery. Destruction, harassing and suppression of such targets as headquarters, reserves, air defence weapons and in particular enemy artillery, helps to preserve the battle group commander's freedom of manoeuvre and give him a greater scope for initiative.

5. **Close Support**. Indirect fire programmes in support of the battle group include:

   a. fire plans in support of offensive operations;

   b. defensive fire plans;

   c. engagement of opportunity targets; and

d. provision of smoke and illumination.

6. **Tactical Employment**. Important considerations in the tactical employment of field artillery are:

a. Artillery is commanded at the highest level and controlled at the lowest. Movement of guns is usually a formation responsibility, whereas fire is controlled by forward observation officers (FOO) at sub-unit level.

b. The fire of field artillery, mortars, rockets and other indirect fire weapons should be fully integrated and controlled by the battery commander.

c. FOOs and fire controllers (FCs) are located forward but remain with the sub-unit to which they are attached.

d. Indirect fire is concentrated to achieve the best results.

e. Fire planning must be simple to ensure flexibility.

f. Indirect fire is used to contribute to, rather than prejudice surprise. Stereotyped application of fire is avoided.

g. Mortars, whenever possible, provide illumination and smoke, releasing artillery for defensive fire tasks.

AIR DEFENCE ARTILLERY

7. **Role**. Air defence artillery prevents enemy aircraft from interfering with land operations.

8. Air defence artillery performs the following tasks:

a. early warning;

b. protection;

c. attrition; and

d. airspace control.

9. **Tactical Employment**. Air defence is an all arms responsibility in the battle group. Most weapons are effective against enemy aircraft and are normally used in self-defence. In addition, battle groups may be allotted short range air defence (SHORAD) systems for specific tasks. SHORAD systems are further sub-divided, according to system characteristics and capabilities, into Close Air Defence Weapon Systems (CADWS) and Area Air Defence Systems. Importance considerations in the tactical employment of these systems at battle group level are:

a. **Close Air Defence**. CADWS should be employed for point defence of defiles, headquarters or concentrated sub-unit locations such as attack position, assembly areas or hides. A CADWS section can defend one point, it should not be split up to defend more than one task because neither task would be properly performed. The section has limited communications and is vulnerable to enemy ground attack. The battle group must keep it informed of enemy activity and provide it with protection when necessary.

b. **Area Air Defence**. These systems, such as ADATS, can give area defence for the battle group. While manoeuvring with the battle group ADATS may provide air defence by following at least one bound behind the leading elements. These systems are vulnerable to ground attack and may require protection from the battle group.

10. **Command and Control**. Air defence artillery fire is controlled at the highest practicable level and is governed by rules of engagement. These rules are established by the theatre commander and disseminated to sections in operations plans, orders and SOPs. For SHORAD, the final decision to engage a target is vested in the detachment commander.

ANNEX B, CHAPTER 1

ARMOUR

ANNEX B, CHAPTER 1

ARMOUR

TANKS

1. **Role**. The tank defeats the enemy by the aggressive use of firepower and battlefield mobility.

2. **Tasks**. The major tasks of tank units are:

    a. participate in covering force actions;

    b. the advance to contact;

    c. attacks;

    d. exploit the effects of weapons of mass destruction;

    e. participate in the pursuit; and

    f. participate in the defence, primarily as the manoeuvre force in counter-attacks and blocking actions.

3. **Tactical Employment**. Important considerations in the tactical employment of tanks are:

    a. The smallest fire unit is the tank troop.

    b. The smallest manoeuvre group is the tank squadron.

    c. Tanks do not operate alone but fight with infantry and other arms.

    d. All movement should be supported from a firm base.

    e. Tanks make the best use of ground for their protection.

    f. Infantry is supported by tanks or tank destroyers. Some tanks, supported by infantry, are held in reserve to influence the battle.

ARMOURED RECONNAISSANCE

4. **Role**. Armoured reconnaissance obtains and relays timely information about the enemy and the ground, and contributes to battlefield security.

5. **Tasks**. At battle group level the major tasks include:

a. surveillance of obstacles, gaps and rear areas;

b. route reconnaissance in the advance and for counter-attack and blocking operations;

c. flank screens;

d. movement control;

e. radiation and chemical monitoring; and

f. utility tasks to include:

    (1) liaison,

    (2) escort duties,

    (3) headquarters/logistic area guards,

    (4) refugee control,

    (5) area and point reconnaissance, and

    (6) picquetting of vital points or bypassed enemy.

6. **Tactical Employment**. Important considerations for the employment of reconnaissance troops are:

a. the smallest manoeuvre element is the reconnaissance patrol;

b. observe without being detected;

c. make and maintain contact;

d. report accurately and maintain communications;

e. avoid decisive engagement; and

f. confirm enemy dispositions.

TANK DESTROYERS

7. **Role**. Tank destroyers (TDs) destroy enemy armour.

8. **Tasks**. These are:

a. participate as part of the covering force causing early attrition of enemy armour;

b. cover armour approaches between forward formations and units in the main defence area;

c. provide direct fire support;

d. provide flank protection;

e. secure lines of departure;

f. support reorganization;

g. assist in picketting bypassed enemy; and

h. assist in rear area security.

9. **Tactical Employment**. The fundamentals of employment are:

a. TDs may remain under formation command or be allocated to battle groups.

b. They provide direct fire anti-armour support to the infantry.

c. The smallest fire unit is the individual TD.

d. TDs must be sited to -

(1) use their best fighting range and not maximum range,

(2) have mutual support between TDs,

(3) provide concentration of fire,

(4) integrate with other anti-armour weapon systems, and

(5) support the rapid redeployment to alternate and secondary fire positions while using the cover provided by ground.

ANNEX C, CHAPTER 1

INFANTRY

INFANTRY

1. **Role**. Infantry closes with and destroys the enemy.

2. **Tasks**. The major tasks of the infantry are as follows:

   a. destroy the enemy in close combat;

   b. hold ground;

   c. form part of the covering force;

   d. act as all or part of a reserve with a task to counter-attack or block;

   e. conduct airmobile operations;

   f. establish surveillance and conduct patrols;

   g. conduct security tasks; and

   h. exploit the effects of weapons of mass destruction.

3. **Tactical Employment**. The basic tactical sub-unit of the infantry is the company. It should only be split in exceptional circumstances. The major considerations for the tactical employment of infantry are as follows:

   a. **Mobility**. Mechanized infantry is completely mobile, regardless of terrain or weather conditions, as it can be employed in mounted, dismounted or airmobile roles in all operations. On foot infantry is slow and limited to the weapons, equipment and ammunition that it carries. The infantry pioneer platoon assists the battalion/battle group in maintaining mobility and in denying enemy mobility.

   b. **Firepower**. The mechanized infantry battalion, and to a lesser extent the mechanized company, is independently capable of seizing and holding ground with a full range of personal and support weapons. The firepower of vehicle mounted weapons is fully exploited in support of dismounted infantry. Infantry weapons combine with and complement the firepower of the battle group. Battle groups with elements of the battalion anti-armour platoon or division anti-armour battalion have added firepower and greater operational flexibility. Infantry Medium Range Anti-Armour Weapons (MRAAWs) form the basis on which the anti-armour system is built and supplement the fire of heavier longer range systems. Battle groups with mortar platoons, capable of firing a wide range of ammunition, have assured indirect fire support and greater operational flexibility. Mortars are most effectively employed when centralized at battle group level for command and controlled at the lowest level to apply fire where and when it is needed. The fire and command and control of mortars should be fully integrated with artillery.

c. **Protection and Security**. The APC offers limited protection to mechanized infantry and they must rely on concealment, cover, use of ground and covering fire for protection while mounted. Troops are most vulnerable when dismounting and thus require covering and supporting fire. The infantryman relies on fieldcraft, fire and movement and the fire support from armour and artillery for protection. The infantry attains the greatest protection from field fortifications. Sub-units establish observation posts (OPs) and conduct patrols for protection and security. The reconnaissance platoon performs surveillance, reconnaissance, screening, patrolling, sniping and security tasks.

d. **Flexibility**. The mechanized infantry battalion is a flexible fighting unit. Its rifle companies and support platoons move in APCs, on foot or by helicopter and can he rapidly grouped. Speed and flexibility in infantry actions are maintained by keeping the unit intact and not detaching sub-units and support weapons.

LONG RANGE ANTI-ARMOUR WEAPONS

4. **Role**. The long range anti-armour weapon (LRAAW) destroys enemy armour.

5. **Tasks**. These are:

   a. fire into designated kill zones;

   b. fire in close support of sub-unit positions;

   c. cover gaps between sub-unit positions;

   d. support counter-moves operations;

   e. support covering forces and guards;

   f. assigned surveillance tasks; and

   g. sniping.

6. **Tactical Employment**. Important employment considerations are:

   a. "In support" of combat teams is the LRAAW's most effective affiliation with the LRAAW remaining under command of the anti-armour platoon commander.

   b. "Under command" of a combat team employed with the covering force is a normal affiliation for LRAAWs.

c. Due to their slow rate of fire, LRAAWs should not be allocated below section (four detachments).

d. Killing zones should be divided into short, medium and long range engagement bands and LRAAWs must be coordinated with all other anti-armour resources.

e. Weapons fire control states may be established for each sector of the Killing zones.

f. All anti-armour sub-units within the battle group must be able to communicate directly with one another. This may be done on one of the following nets:

  (1) anti-armour,

  (2) battle group, or

  (3) joint anti-armour/reconnaissance.

ANNEX D, CHAPTER 1

ENGINEERS

ENGINEERS

1. **Role**. Engineers assist the land force to live, move and fight on the battlefield and work to deny the same to the enemy. Engineers may also be employed as infantry when required.

2. **Tasks**. The major tasks undertaken by engineers fall under the following headings:

a. **Mobility** -

(1) reconnaissance of obstacles and routes;

(2) filling craters, removing blowdown, clearing abatis and breaching anti-tank ditches;

(3) breaching minefields;

(4) clearing debris, barricades and rubble within cities in support of FIBUA operations;

(5) preparation of crossing sites including the provision of bridges, ferries and boats; and

(6) maintaining and improving roads, fords and crossing sites.

b. **Counter-Mobility** -

(1) creation or improvement of barriers, particularly anti-tank ditching, laying of minefields; and

(2) bridge demolitions, road craters, abatis, creating rubble, mining and the demolition of utilities or facilities.

c. **Survivability** -

(1) digging assistance;

(2) reinforcement of strongpoints and observation posts;

(3) advice and assistance in concealment, countersurveillance and deception plan tasks;

(4) advice and assistance in the construction of wire obstacles;

    (5) reinforcement of positions in built-up areas and wooded areas by improving observation and fields of fire, and developing passive obstacles; and

    (6) clearance of boobytraps.

d. **General Engineer Support** -

    (1) provision of potable water;

    (2) support of area decontamination operations; and

    (3) provision of engineer intelligence.

3. **Tactical Employment**. The major considerations for the tactical employment of engineers at battle group level are:

a. Battle group commanders must judge what balance to strike between the technical advice offered by the engineer adviser and their tactical plan.

b. Battle group commanders should be prepared to provide protection parties for engineers.

c. The decision to employ engineers as infantry must be made judiciously, nevertheless there will be situations where such employment is necessary.

ANNEX E, CHAPTER 1

SIGNALS

ANNEX E, CHAPTER 1

SIGNALS

1. **Role**. Signals provide commanders and their staffs with communications and deny the enemy's use of the electromagnetic spectrum by waging electronic warfare (EW).

2. **Tasks**. The tasks of Signals at battle group level do not differ from those at formation level except that administrative support of the headquarters and local defence is a collective responsibility of all members of the headquarters and not solely Signals. Signals' tasks at battle group level are:

   a. provision of advice on all communications and EW matters;

   b. operation, engineering and first line maintenance of battle group command and control and information systems (CCIS) including combat net radio, ADP, line and dispatch riders (DRs);

   c. execution of the formation signal security plan; and

   d. control and distribution of frequencies and SIGSEC material within the battle group.

3. **Tactical Employment**. Important considerations in the tactical employment of Signals in the battle group are:

   a. Infantry battalion signal platoons and armoured regiment signal troops are small and have limited manpower and resources. They may require augmentation from the formation to perform such functions as the laying of line and expanded DR services.

   b. The signal troop/platoon regardless of its size must provide continuous, and reliable communications.

   c. While mobile battle group operations normally rely on combat net radio as the primary means for providing command and control, battle group commanders must be prepared to use every means available to minimize the use of combat net radio in conditions of electronic warfare (EW). The use of detailed orders, briefings, personal contact, liaison officers (LOs), DRs, and line will be the preferred methods of communications during some operations.

   d. The battle group signal officer must be included early in the planning of operations especially if regrouping, sustained operations or long communicating distances are involved. In these cases he will be required to plan for additional frequencies which are non-interfering, allocation and distribution of low level codes for attached units, co-ordination with the gaining or losing unit signal officer and formation signal squadron, special resupply procedures for low level codes and deployment of radio rebroadcast stations. The operation of war will also determine which type of alternate communications should be used in place of combat net radio in an active EW environment.

e. Formation headquarters will provide communications to the battle group in the form of secure combat net radio, DRs and line. Formation may also provide on an attached or in-location basis, line or radio relay detachments to ensure communications to the battle group. This will pose special siting, positioning, resupply and maintenance problems which must be resolved by the battle group. Specialized signal elements such as EW detachments may be in-location of the battle group. On these occasions co-ordination must be effected with the battle group headquarters responsible for the area.

ANNEX F, CHAPTER 1

TACTICAL AVIATION

ANNEX F, CHAPTER 1

TACTICAL AVIATION

1. **Role**. Tactical aviation supports the army with aerial firepower, reconnaissance and transportation.

2. **Tasks**. The tasks assigned to tactical aviation are:

   a. reconnaissance and observation;

   b. direct and control fire (Air OP, FAC);

   c. anti-armour and other fire support;

   d. tactical airlift of troops, equipment and supplies;

   e. mine laying;

   f. logistic airlift;

   g. command and liaison;

   h. aeromedical support; and

   j. communications assistance.

3. **Tactical Employment**. Important considerations in the employment of tactical aviation at battle group level are:

   a. Helicopters will rarely be attached to individual battle groups. They may, however, be tasked in response to battle group requests to carry out specific missions. In these circumstances, they are coordinated through the Fire Support Coordination Centre (FSCC) in a manner similar to other in-location elements.

   b. Attack helicopters are invariably retained under formation command, but may support battle group operations.

   c. Reconnaissance helicopters are highly vulnerable to enemy air defences and to enemy armed helicopters. They are not normally tasked to operate near the forward edge of the battlefield. In their reconnaissance and air CIP roles, tasks should be selected which make full use of their ability to move quickly over long distances or difficult terrain rather than needlessly exposing them on tasks which can be carried out by ground observation.

d. Transport helicopters are particularly useful for supporting logistics tasks and troop movement, however, they are extremely vulnerable when operating in forward areas. Subsequent tasks, such as casualty evacuation, should be identified to make use of aircraft returning from forward areas on completion of their primary tasks.

ANNEX G, CHAPTER 1

ADMINISTRATION

ANNEX G, CHAPTER 1

ADMINISTRATION

1. **Role**. Administrative echelons provide first line combat service support (CSS) to the battle group in operations.

2. **Tasks**. The major tasks of the administrative echelons are:

   a. provide battle replenishment of combat supplies;

   b. provide routine first line replenishment of combat supplies and other commodities;

   c. provide first line repair and recovery;

   d. provide first line medical services and evacuation;

   e. provide first line personnel services;

   f. provide first line transport;

   g. coordinate arrangements with the Service Battalion for the delivery forward of the daily battle group requirements; and

   h. coordinate arrangements with the brigade headquarters administrative staff for the provision of bath, laundry and decontamination services.

3. **Command and Control.**

   a. When a battle group is formed with an armoured regiment or an infantry battalion to complete a specific mission, there are two possible options of command relationship:

      (1) **Under Command -**

         (a) The command and control of the administrative echelons of both arms units is entirely left to the battle group commander who can choose one of two options:

            (i) **Centralized**. Keep the administrative echelons centralized under battle group command and control. A2 and B echelons may be brigaded under command for movement of the Service Battalion.

            (ii) **Decentralized**. Delegate the command and control of the

A1 echelons to their respective combat team commanders and to keep A2 and B echelons under battle group command.

(b) The formation of a battle group based on two arms units implies that those units come with their complete first line capability. If these resources become exhausted because of a high level of activities, it is the battle group commander's responsibility to establish priorities for administrative support and to request additional service support resources from higher formations.

(2) **In Support -**

(a) The battle group commander, unless specifically included, has no authority nor responsibility for the administration of the supporting elements.

(b) If the administrative echelons of the supporting units are located within the battle group area, they would normally be under command for movement of the battle group commander.

b. **Communication**. A battle group administrative net is established to keep the command net free for operational traffic.

c. The battle group commander must ensure that the administration of regrouped elements is coordinated. Armoured regiments are administratively organized to routinely detach sub-units in support, but infantry battalions have fewer resources and less flexibility in this respect. Plans must cover all aspects of administration to ensure that operational groupings and tasks are supported.

d. Once battle group commanders are satisfied that their tactical operations can be administratively supported, they should not be burdened with administrative details. They should rely on DCOs, 2ICs, echelon commanders, Adjudants and Operations Officers to coordinate and implement the administrative plan.

CHAPTER 2

COMMAND AND CONTROL

CHAPTER 2

COMMAND AND CONTROL

SECTION 1

GENERAL

201. FUNDAMENTALS

1. Command and control relies on certain fundamentals:

   a. **Unity of Command**. A single commander, vested with the requisite authority and resources, directs subordinates and is responsible for each operation.

   b. **Flexibility**. A commander groups his forces in a manner that provides flexibility to accomplish his task. Some units may be assigned new tasks and redeployed quickly, while others require more time, co-ordination and support.

   c. **Affiliations**. Sub-units that routinely work together operate more efficiently. Commanders foresee possible groupings and put these troops together for training. Established affiliations should be maintained.

202. RELATIONSHIPS

1. Table 2-1 provides a comparison of command and control relationships as they apply to the activities, functions and authority of the commanders involved.

Serial	Relationship	Activity/Function/Authority to Gaining Commander			
		Control of Operations	May Assign Missions or Tasks as Necessary	May Delegate Full Authority to Subordinate Commander	May Assign Tasks to Separate Elements
(a)	(b)	(c)	(d)	(e)	(f)
1	Under Command	Yes	Yes	Yes	Yes
2	In Support	Yes	Yes	Yes	No
3	In Location	No	No	NA	NA

Serial	Control of Combat Service Support	Control of Movement		
		F Echelon	Support Echelons	Deployment Areas
(g)	(h)	(j)	(k)	(m)
1	Yes	Yes	Yes	Yes
2	No	Yes	No	No
3	No	Yes*	Yes*	Yes*

* Subject to the direction of the superior commander

Table 2-1 Comparison of Command and Control Relationships

203. STANDING OPERATING PROCEDURES (SOPs)

1. Good SOPs contribute greatly to the ease of command and control. They are developed to reduce certain activities within the unit to well known and automatically applied drills. They are developed for both operations and administration. The headquarters, in developing its own SOPs, ensures that they are in consonance with those of brigade headquarters. If SOPs at unit level are thorough, there should be little requirement for separate SOPs at squadron and troop level.

204. CONTROL MEASURES

1. The following measures are defined in Supplement 3 to Staff Duties in the Field, The Army Glossary, and are repeated here for ease of reference:

   a. **Axis**. The battle group moves astride this line. The axis follows a route or a convenient terrain feature. There is no requirement to clear enemy from the axis unless so ordered.

   b. **Bound**. A single movement, usually from cover to cover, made by troops often under enemy fire. A bound is completed on a tactical feature that a commander may use to control the manoeuvre of his forces.

   c. **Phase Lines**. These are easily recognizable terrain features. If they are also tactical features, they can double as bounds, but this is of lesser importance since their purpose is to provide a convenient means of controlling and coordinating movement. Phases lines should be at right angles to an axis and be allotted nicknames.

d. **Report Lines**. These are designated terrin features where troops must report to their command echelon. For simplicity they can correspond to other control features, ie, phase lines or bounds, and are allotted nicknames.

e. **Boundaries**. These define the area of responsibility for a unit or sub-unit.

f. **Waiting Areas**. These are selected areas along the axis/route used for dispersal, concealment of vehicles and troops and for control of movement.

g. **Harbour**. It is an area that permits dispersal and concealment, used for rest, maintenance, replenishment or other administrative activities.

h. **Hide**. It is the location occupied by troops prior to moving to battle positions.

j. **Battle Position**. It is the ground where a defending unit or sub-unit fights. It may be either primary, alternate or a secondary position occupied by a headquarters, command post, unit or weapon.

  (1) **Primary Position**. This is the best position available to carry out the primary task.

  (2) **Secondary Position**. This is the best position available to carry out a secondary task.

  (3) **Alternate Position**. This is a position adjacent to the primary or secondary one, from where the primary or secondary task can continue to be fulfilled.

k. **Killing Zones**. These are areas where the enemy is forced to concentrate, because of natural and artificial obstacles, making him a lucrative target.

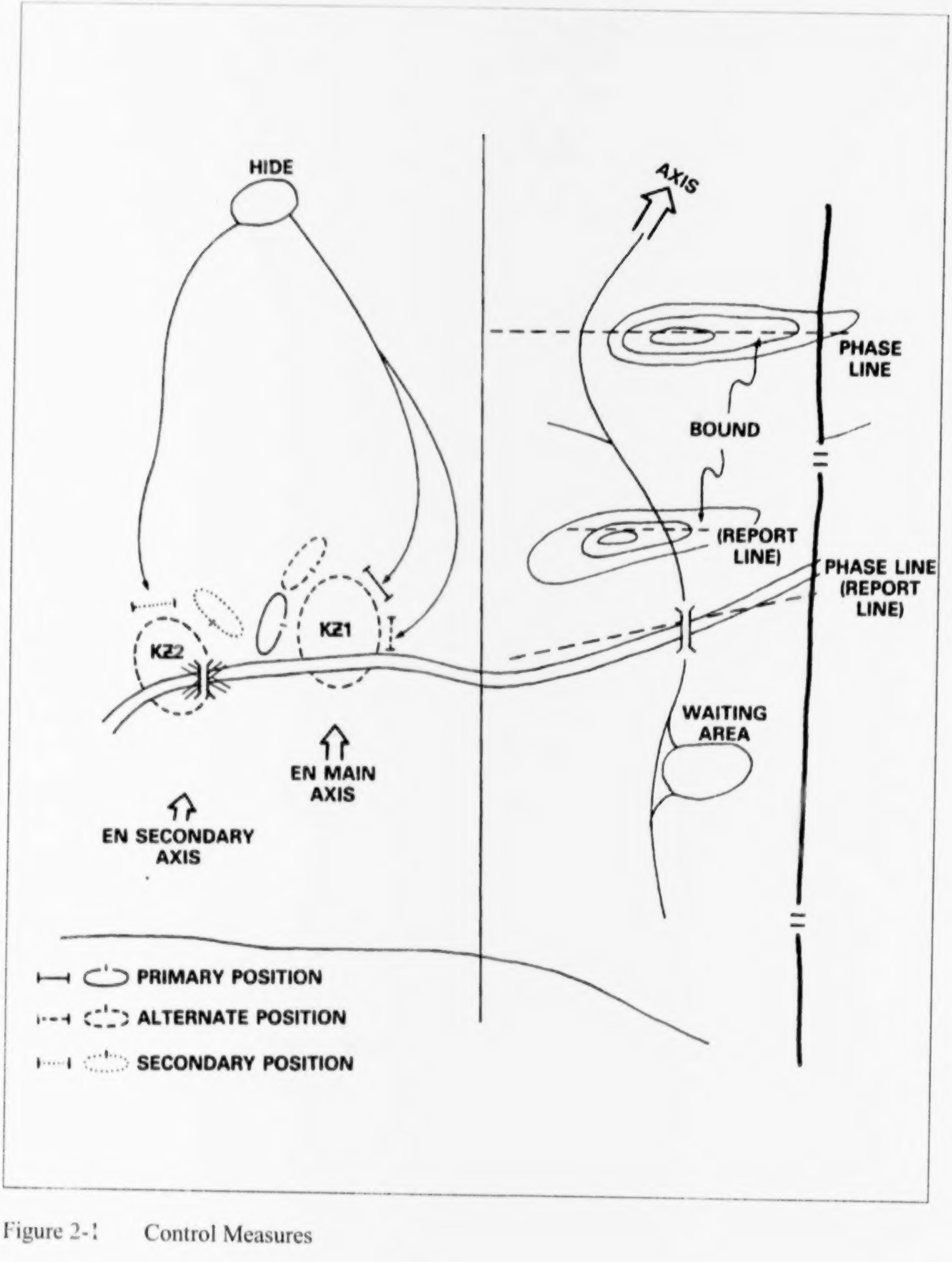
HIDE
AXIS
PHASE LINE
BOUND
(REPORT LINE)
PHASE LINE (REPORT LINE)
KZ1
KZ2
WAITING AREA
EN MAIN AXIS
EN SECONDARY AXIS
PRIMARY POSITION
ALTERNATE POSITION
SECONDARY POSITION

Figure 2-1 Control Measures

SECTION 2

THE COMMANDER

205. GENERAL

1. The effectiveness of a battle group depends largely on the leadership and ability of the battle group commander. He exercises full authority over a combined arms team to complete assigned missions. He must gain and maintain the confidence of subordinates, particularly those of other arms and services attached to his battle group. He must command with a complete knowledge of the strengths and weaknesses of all arms and with foresight, imagination and decisiveness.

206. RESPONSIBILITIES

1. The Battle Group Commander has two principal responsibilities:

   a. achievement of his mission, with a minimum loss of life and expenditure of resources; and

   b. providing for the welfare of his troops.

2. The Battle Group Commander plans, commands, and co-ordinates. He plans two levels down while being fully aware of the formation commander's plan, options and future intentions. He gives as much responsibility as possible to sub-unit commanders and staffs, (remembering that he cannot delegate authority he does not possess) so that he may concentrate his efforts on matters important to the battle group as a whole, rather than becoming involved in detail. This is particularly important in dealings with other arms as he depends on their knowledge and experience when seeking their advice.

207. LOCATION OF THE COMMANDER

1. The Battle Group Commander influences his officers and men by conspicuous leadership. It is a matter for his professional judgement to decide where he can best command his battle group. In battle, it would be normal for him to be with his tactical headquarters near the critical point of the battle. When the battle group is not actively engaged in battle he works from his headquarters where he is available to his staff and subordinate commanders.

SECTION 3

HEADQUARTERS

208. FUNCTIONS

1. Battle group headquarters provides the commander with the staff assistance, communication facilities, vehicles, equipment and support personnel necessary for the command and control of the battle group. Its primary functions are to:

a. receive, record and display for the battle group commander the information and intelligence he requires to direct operations;

b. assist the battle group commander in the preparation and distribution of orders;

c. on behalf of the battle group commander -

(1) monitor operations; and

(2) control and co-ordinate the activities of battle group sub-units; and

d. keep all elements of the battle group, formation headquarters and adjacent units advised of the tactical situation.

209. ORGANIZATION

1. **Battle Group Headquarters**. Battle group headquarters consists of a command post (CP), a step-up CP and support elements:

a. **Command Post**. It is the nerve centre of the battle group. Most missions are planned, directed, coordinated and monitored here. It is control for the battle group command net and is an out station on the formation command net. The battle group operations officer supervises the operations of the CP. The battle group commander will be either in or near the CP when he is not with his tactical CP or visiting. The CP will be manned by duty officers and communicators who act as a coordinated team. Collocated with the CP are the -

(1) **Fire Support Co-ordination Centre (FSCC)**. Its role is to co-ordinate artillery, mortar, naval gun fire, offensive air support, and air defence. It is normally established by the battery commander (BC) using the mortar platoon FSCC vehicle in an infantry-heavy battle group or the battery commander's vehicle in an armour-heavy battle group.

(2) **Intelligence Centre**. This small element provides the commander, his staff and the sub-units with combat intelligence. It collects and passes information of intelligence interest to formation headquarters. It is also the

unit NBC reporting centre and is manned by the intelligence officer and his staff.

b. **Step-up**. At battle group headquarters there are two identically equipped command vehicles. Because there are insufficient personnel to man both vehicles the second vehicle has only a skeleton staff. To ensure continuous control and communications while the headquarters is moving, the second vehicle is used as a step-up.

c. **Support Elements**. Battle group headquarters includes the necessary signal support and protective party. It has a limited administrative capability and relies on the A echelon for support. The unit medical station is usually collocated with battle group headquarters.

2. **Tactical Command Post**. When the battle group commander wishes to be close to the action he moves there in his own vehicle. The, battery commander (BC) and the Supporting Engineer troop commander usually accompany him and together form his tactical CP. Depending on the situation he may also take with him some or all of his other arms advisers.

210. OPERATION

1. **General**. The efficiency and survival of the headquarters depend upon its small size and use of simple, practiced drills for movement, concealment, defence and routine work. If it is allowed to become too big or adopts complicated communications or work procedures its efficiency and the likelihood of its survival are reduced.

2. **Sitting**. Communications to higher and subordinate headquarters are essential. The location chosen must provide communications and should:

a. provide good ground and air cover;

b. provide firm ground for vehicles and adequate room for dispersion, including a helicopter landing site;

c. provide screening from intercept;

d. be accessible to the main axis; and

e. be defensible.

3. **Moves**. The move of battle group headquarters cannot interfere with the continuity of command and control. The following points are important for a smooth transition:

a. Moves are anticipated and general locations with alternates chosen well in advance by the operations officer in consultation with the signal officer.

b. The control of the radio nets passes smoothly from the CP to the step-up CP, once the latter has verified that it is in contact with all stations.

c. The move must be short in time so that battle group headquarters can be reconstituted as quickly as possible.

d. Handover of information is completed once the two CPs have rejoined.

e. For a successful move security is vital.

SECTION 4

COMMUNICATIONS

211. RADIO

1. Combat net radio (CNR) is the primary but most vulnerable means of communications used throughout the battle group, and elements must be prepared to use alternate means in an active EW environment, or as otherwise ordered by formation headquarters.

2. During periods when no CNR limitations are in effect, or in situations when the use of alternate means is not feasible, sub-units normally operate their own individual nets. Sub-units control their own nets and are out stations on the battle group net.

3. The pace of operations may dictate the requirement to place the entire battle group on the same net. This permits the immediate passage of information; however it reduces the transmission time available to commanders and demands a high level of net discipline. It also increases the vulnerability of the battle group communications to jamming. Placing the battle group in this situation should be the exception rather than the rule.

4. Separate radio nets are normally established for:

   a. command;

   b. fire control;

   c. special operations; and

   d. administration.

5. Communications are essential to the success of the mission and they must be well planned, strictly controlled and precisely maintained. This is the responsibility of the battle group signal officer.

6. **Defence Against EW**. Battle groups maintain the highest standards of voice procedure, radio discipline and security to counter the EW threat. They must be prepared to continue operations when enemy jamming has disrupted normal radio communications. To ensure this capability exists, in addition to the use of anti-jamming drills, planning should take account of the EW threat and orders should include contingency plans for the continuation of operations without radio. Protective measures include the use of:

   a. line or civilian telephones, which can be secure using the proper equipment;

   b. liaison officers (LOs) and dispatch riders (DRs);

   c. comprehensive SOPs that reduce the transmission time for radio orders;

d. orders that require a minimum of subsequent guidance;

e. visual and audio signals to control operations; and

f. radio discipline and maintenance of a high standard of training.

212. LIAISON

1. A battle group maintains continuous mutual liaison and exchanges of information with adjacent battle groups.

2. The battle group follows the established principles for liaison which are:

a. left to right;

b. rear to front;

c. higher to lower headquarters;

d. supporting to supported unit/formation;

e. for passage of lines -

(1) front to rear on the withdrawal, and

(2) rear to front on the advance; and

f. for reserved demolitions the headquarters responsible for ordering the firing to the unit/sub-unit demolition guard.

SECTION 5

BATTLE PROCEDURE

213. GENERAL

1. Battle procedure is the process by which a commander receives his orders, makes his reconnaissance and plan, issues his orders and prepares and deploys his troops for battle. The procedure should be executed to make maximum use of time by concurrent activity at each level of command.

2. Battle procedure is not a rigid process. It must be sufficiently flexible to conform to each situation. Commanders must not hesitate to abbreviate their battle procedure in order to react quickly to changing situations.

3. Commanders must ensure that their subordinates are allowed adequate time to conduct their own battle procedure. If time is limited, commanders should be prepared to sacrifice some of their time to permit the maximum time possible for their subordinates' preparation.

214. ORGANIZATION

1. To facilitate battle procedure, certain standard groups are established. See Table 2-2. These are specified in unit SOPs. They include:

   a. **Reconnaissance Group**. This consists of the commander and those representatives of supporting arms whose advice he needs to prepare his plan. In addition, he should have a communications and a protective party accompanying him.

   b. **Orders Group**. This consists of the reconnaissance group, combat team commanders, combat support company/platoon commanders, supporting arms representatives who are not part of the reconnaissance group, and administrative company commanders. Other personnel may attend but the number should be kept to the minimum required to receive and implement the battle group commander's orders.

Serial	Group	Regiment	Squadron	Troops
(a)	(b)	(c)	(d)	(e)
1	RGP	CO IO Sp Arm Comds	OC LO Sp Arm Comds	Troop Leader Crew Member
2	OGp	CO 2IC OpsO IO SIGO Sqn OCs RSM Sp Arm Comds	OC LO BC 2IC Tp Ldrs SSM Sp Arms Comds	Troop Leader Crew Comds

Table 2-2 Typical Composition of R and O Groups

c. **Main Body**. This group normally includes the following -

(1) **reconnaissance parties** (These are drawn from the main body and consist of personnel who will reconnoitre and lay out the assembly area, harbours, waiting areas or other tactical control areas. Reconnaissance parties usually include representatives from all sub-units, support platoons, support arms and military police for signing and traffic control),

(2) **the remainder of F Echelon**,

(3) **A1 and A2 Echelos, and**

(4) **B Echelon** (if moving under control of the battle group).

2. Preparations for battle by these groups are conducted concurrently. For example, while the battle group commander is making his reconnaissance, his orders group may be moving to the rendezvous for his orders; the reconnaissance parties may be confirming locations and routes forward; and the main body may be preparing for battle by replenishing fuel, ammunition and rations.

215. SEQUENCE OF BATTLE PROCEDURE

1. Although battle procedure is continuous, the battle procedure cycle is initiated on receipt of a warning order from higher headquarters.

2. At this point the battle group commander would take some or all of the following sequential steps:

a. make a quick map study and time appreciation;

b. alert reconnaissance group;

c. issue a warning order;

d. receive orders from his superior commander;

e. make a detailed time appreciation;

f. do a map study and prepare an outline reconnaissance plan;

g. prepare a reconnaissance plan;

h. issue supplementary warning order;

j. conduct of reconnaissance;

k. estimate of the situation and issue orders;

m. co-ordinate the activities and requirements of his subordinates; and

n. supervise the deployment.

216. DETAILS OF BATTLE PROCEDURE

1. **Initial Time Appreciation**. Upon receipt of the brigade commander's warning order, the CO does a time appreciation. Working backwards from the time of his commander's orders, he first calculates the travel time to the location where orders will be given. Then, subject to the direction contained in the warning order, he assesses the time available to conduct preliminary reconnaissance and troop movements. Following a further analysis of the higher formation warning order, he alerts the reconnaissance group and prepare and issue a warning order to his subordinate commanders.

2. The battle group commander's initial warning order causes his subordinates to initiate battle procedures. The warning order should be issued as soon as the battle group commander has certain essential information. It should contain the following essential information:

a. the scope of the operation and the probable mission;

b. the earliest time of movement of the main body and any restrictions on reconnaissance;

c. the rendezvous for the reconnaissance group;

d. the time and place for orders;

e. administrative instruction affecting the resting or feeding of troops, grouping, issue of ammunition, movement to assembly areas, etc; and

f. acknowledgement.

3. Warning orders are delivered by the fastest means. This is normally radio except when electronic silence is imposed, then dispatch riders are the best means.

4. Grouping is adjusting the organization of a unit and assigning attached elements to the restructured sub-units for undertaking specific tasks. The formation operation order directs the attachment or detachment of sub-units/elements to or from a unit for a particular operation. Regrouping within the battle group may occur frequently, however, it is disruptive and should be kept to a minimum. It should not be attempted when in contact. Although it may be necessary to detach tank troops and infantry platoons from their parent sub-units for specific tasks, this should be avoided whenever possible.

5. **Receipt of Orders**. A commander should arrange to meet his reconnaissance group at a nearby rendezvous following the brigade commander's orders. Frequently arms advisers, who are commanders in their own right, must also attend orders of their functional commander. They are then in a position to advise on their arm's support to the higher formation plan and details of support available from the higher formation.

6. **Time Appreciation**. Following the receipt of orders, a commander knows the time at which the operation and its stages will begin. He must now do a detailed time appreciation to take advantage of the available time. His appreciation covers the following:

a. Working backwards from H-hour, the commander allows sufficient time for subordinate commanders to complete their battle procedure. They too must reconnoitre, estimate the situation, plan, issue orders and deploy troops. When time is short, which inevitably it is, he must abbreviate battle procedure at, all levels, as opposed to taking most of the available time for himself at the expense of subordinate formations and units.

b. This leads to decisions concerning the extent of reconnaissance, ie, is there time for a detailed reconnaissance? Should the reconnaissance be done by vehicle, aircraft, or a combination of these means? Possibly there is insufficient time for a reconnaissance, in which case the plan must be prepared from a study of maps and air photographs.

c. Troop movements are also a major consideration. The battle group commander must determine the time that his troops must move from their present locations to new locations, such as forward assembly areas, defence areas or attack positions. This, in conjunction with the formation traffic control plan, fixes the time by which the troops must begin moving.

d. The commander must determine the time and location of his own orders. He may be forced to prepare and issue orders to his combat team Commanders based solely on his map study, completing his reconnaissance concurrently with that of his subordinates. When time is short, it may be necessary to issue orders by net radio, area trunk system, signal dispatch service, or liaison officer.

e. If time is pressing a coordinating meeting is deleted because it takes subordinate commanders away from their troops at a time when their presence is urgently required.

7. **Map Study and Outline Plan**. A map study is the first step in deciding how to accomplish a task. The amount of time spent on the map study depends upon the time available for reconnaissance. Generally the more time a commander has available for reconnaissance, the less time he needs to spend on the map study. A map study is used in one of two ways:

a. When time is available for reconnaissance prior to orders, the map study provides an outline plan, which may be confirmed or adjusted during reconnaissance. The adjusted plan is then used as the basis for the commander's orders.

b. When time is not available for reconnaissance prior to orders, the plan derived from the map study serves as the basis for orders. Later, a commander reconnoitres concurrently with his subordinate commanders, adjusting the plan as necessary.

8. **Reconnaissance Plan**. Reconnaissance either confirms the commander's outline plan or indicates a requirement to adjust it. In effect, the reconnaissance answers questions which cannot be answered from the map. He decides which questions can be answered from each location and which questions can be answered en route. If security permits, it is useful to view the area from the enemy's side. This should suggest important information, such as likely enemy attack positions, approaches and strong points. The reconnaissance plan should include a decision as to where the commander will meet with his orders group. The major factors to consider in preparing the reconnaissance plan are:

a. threat, as this influences where, when and how the reconnaissance is conducted;

b. time available to complete the reconnaissance;

c. means of transportation;

d. points to be checked and decisions to be made during the reconnaissance;

e. locations to be visited;

f. routes to be taken into, out of, and within the area of responsibility; and

g. security requirements, including the provision of a protective element.

9. **Supplementary Warning Order**. Having completed his time appreciation, map study, outline plan and plan for reconnaissance, the commander issues a supplementary warning order. This should be as complete as possible, although time and the means of communication may restrict the amount of detail it contains. Details which are not immediately available should not delay transmission of the warning order. If need be, the missing information may be forwarded in a subsequent order. Ideally this supplementary warning order should contain:

a. nature and location of impending actions, including probable tasks or moves;

b. earliest time of or degree of notice for move;

c. rendezvous and time of orders or, the time at which written or radio orders may be expected;

d. orders for or restrictions on moves of reconnaissance parties or other preliminary moves; and

e. administrative instructions regarding such matters as feeding or resting, special equipment to be taken and training to be reviewed.

10. **Reconnaissance**. At this stage, the battle group commander reconnoitres in accordance with his reconnaissance plan. This reconnaissance may lead to adjustments in his outline plan. If his battle procedure has been abbreviated, he may conduct his reconnaissance after issuing orders.

11. **Estimates and Orders**. The written estimate and operation order formats are detailed in the manual, **Staff Duties in the Field**. In mechanized operations, a combat estimate done mentally or written in note form is the norm. The combat estimate is a modification of the written estimate. The essentials are:

a. **Aim** including any limitation imposed by the higher commander.

b. **Factors**:

    (1) enemy,

    (2) ground,

    (3) time and space, and

    (4) assessment of tasks.

c. **Course open** to the enemy must be considered first if he has the initiative, then our own courses based on the factors and deductions made.

d. The **plan** is based on the course selected and may be written in note form using the mission and execution paragraphs of the operations order format.

12. **Orders**. Battle group orders may be written, oral or graphic. At the beginning of an operation, orders may be written but are more likely to be given verbally followed by confirmatory notes. Radio orders will be a frequent method of issuing orders especially while operations are in progress. The format follows the headings of an operation order, but deletes those part that are not required and simply confirms other parts previously given that have not changed. Overlay orders can be used to depict the battle group commanders direction graphically. They are useful to show alternate courses of action, to adjust boundaries, axes, or objectives, or to give further direction regarding a stage in an operation which was only described in outline in the initial order.

13. Operation instructions are normally used by formation headquarters. They are not often used at battle group level. They can be issued to battle group commanders in fast moving operations. They contain outline information only, emphasizing the brigade commander's general plan of intentions and tasks of subordinates. They allow the battle group commander as much latitude as possible in carrying out his task.

14. **Co-ordination**. Co-ordination is a key function of the commander, and it is a continuing process. It is at this stage that details of the plan are tied together and any adjustments are made.

15. **Deployment**. A commander's aim is to position his force at the right place with the correct grouping, at the right time, properly equipped, briefed and ready to fight. This process starts with the receipt of the initial Wng O and ends when the troops arrive in the deployment area.

16. **Other Considerations**. The following points help the commander to achieve maximum concurrent activity in his battle procedure:

a. Each formation has SOPs that specify -

(1) standard composition of reconnaissance and orders groups,

(2) routine for issuing orders, and

(3) normal division of personnel and equipment into echelons.

b. Warning orders are sent as early as possible, even if the information available is incomplete. If necessary, supplementary warning orders are sent.

c. Arms advisers make contact with the commander to whom they are supporting at the earliest possible time and, in any event, at the conclusion of the brigade commander's orders.

d. Activities are planned so that arms advisers may attend orders of their supported formation commander, as well as those of their own commander.

e. If radio or electronic silence is in effect, liaison officers using helicopters and other means of transport are used to deliver or amplify orders.

Serial	**Battle Group**	**Combat Team**	**Platoon/Troop**
(a)	**(b)**	**(c)**	**(d)**
1	Issue Wng O and attend brigade orders.	Issue Wng O.	Issue Wing O.
2	Complete time and map appreciation, conduct recce.	Move to RV for CO's orders.	Prepare for preliminary moves.
3	Estimate, plan and prepare for orders.	O Gp marks maps and is briefed on the enemy situation.	
4	Issue orders.	Complete time and map appreciation, confirm Wng O, give RV for squadron orders, send LO back with map.	Initial marking of maps.
5	Follow-on co-ordination.	Conduct reconnaissance, estimate, plan and prepare orders.	Move to RV for O Gp.
6		Issue orders.	
7		Follow-on co-ordination	Complete time and map appreciation, conduct reconnaissance if possible, plans, issue orders.
8			Move to position.

Table 2-3 Typical Battle Procedure Sequence.

SECTION 6

FIRE PLANNING

217. GENERAL

1. Fire planning is organizing the fire of available weapons to support the tactical plan. The fire plan is part of the total tactical plan prepared by a commander.

2. Fire plans are classified as either offensive or defensive. Each may be quick or deliberate which usually indicates the level of command at which the fire plan is prepared. Quick fire plans, either offensive or defensive, are undertaken at the battle group level and below. Deliberate fire plans are prepared at brigade and higher levels.

218. FIRE PLANNING RESPONSIBILITIES

1. Responsibility for preparing a fire plan rests with the tactical commander.

2. The artillery officer assigned to advise and assist the tactical commander is responsible for:

   a. keeping the tactical commander informed of the capabilities of all fire support resources available to support the tactical plan;

   b. preparing orders and instructions on behalf of the tactical commander for the implementation of the fire plan; and

   c. as delegated, issuing orders for the execution of a fire plan on behalf of the tactical commander.

3. The artillery officer assigned to advise the commanding officer is normally the commander of the field artillery battery allotted in direct support to the battle group. Forward observation officers (FOO) from this battery are assigned as advisors to the combat team commanders. Artillery advisors must be kept aware of the tactical situation and developments as they occur. They are included in all tactical planning from the outset and they accompany the tactical commander on all reconnaissance.

219. FUNDAMENTALS OF FIRE PLANNING

1. Fire plans are developed adhering to the following fundamentals:

   a. **Co-operation**. Co-operation between the tactical commander and the artillery adviser means an understanding of each others capabilities and limitations so that the former may be knowingly exploited and the effects of the latter minimized. It requires the timely passage of information of current intentions and availability of firepower to support those intentions.

b. **Concentration of Fire**. In any situation there are probably more worthwhile targets than one that can be effectively engaged at one time with all available fire support. Tactical commanders should avoid the temptation of planning the simultaneous engagement of multiple targets. Fire support is much more effective if it is concentrated in time and space. Important targets are dealt with one at a time using all available fire on each.

c. **Flexibility**. This means that tactical and fire plans can be easily modified. Superimposing and concentrating artillery fire allows tactical commanders to lift some but not all fire from a planned engagement to deal with a surprise threat. Maintaining a reserve of available ammunitions aids flexible response to the unexpected as well.

d. **Simplicity**. Ease and speed of preparation and execution require that fire plans be simple. Fire plans become complex if multiple simultaneous engagements are undertaken, or in situations where non standard procedures or munitions are employed. If a fire plan cannot be kept simple then additional time must be spent in its preparation.

e. **Surprise**. Fire is most effective if delivered with little or no warning. Fire planners should avoid adjusting fire particularly if large target areas are involved and slight inaccuracy is tolerable.

220. FIRE PLANNING TERMINOLOGY AND DEFINITIONS

1. The following are current fire planning terms and definitions:

a. **Preparatory Fire**. This is directed on strong points to inflict casualties, damage equipment and fortifications, disrupt command and control and demoralize the enemy.

b. **Covering Fire**. Covering fire neutralizes enemy direct fire weapons that could interface with friendly troop movement.

c. **Interdictory Fire**. Interdictory fire is applied to an area or point, often behind the enemy's main defence, to prevent him from conducting operations in that area or at that point.

d. **Defensive Fire**. This is to hinder or break up an enemy assault on our battle positions.

e. **Planned Target**. This is any target on which fire is prearranged. These targets are numbered for ease of reference.

f. **Scheduled Target**. This is a target that is to be attacked at a specific time.

g. **On Call Target**. This is a target that is to be attacked on order.

h. **Final Protective Fire (FPF)**. This is a planned, on call target. Fire is immediately available. The aim of FPF is to break up enemy movement onto or across friendly defended areas. These targets are planned on the most obvious or most dangerous enemy approaches.

j. **Superimposed Fire**. This is augmenting fire from another fire unit and may be lifted by the tactical commander onto targets of opportunity or unforeseen threat.

k. **Fire Plan**. This is created to ensure that weapons of a unit or formation are coordinated to support manoeuvre or defence.

m. **Target List**. This is a list of planned targets with numbers, locations and a brief description of each. It permits quick selection.

n. **Target Overlay**. This is a transparent sheet superimposed on a map or chart to enable target locations and designations to be entered or erased readily. It should also show boundaries and friendly forward dispositions.

p. **Fire Plan Table**. This is a presentation of planned targets giving data for engagement. Timings are shown in graphic form.

221. ALLOTMENT OF ARTILLERY FIRE SUPPORT

1. **General**. This is a process that places field artillery fire at the disposal of a unit or formation without grouping the artillery units involved with the unit or formation. Field artillery fire is allotted to supported units or formations in one of the following ways:

a. in Direct Support;

b. at Priority Call; or

c. in Support.

2. **In Direct Support**. A field artillery fire unit, indirect support of an arms unit, provides liaison, observation and artillery communications to the supported arms unit. In addition, the arms unit receives priority of fire from the fire unit and a high degree of assurance that fire will be provided when requested. A field artillery battery is often placed in direct support of a battle group. The commander and forward observation officers of the battery will provide liaison, observation and artillery communications to it.

3. **At Priority Call**. Field artillery at priority call to an arms unit means giving that arms unit first call on support. Liaison, observation and communications are not usually provided and fire is controlled by a direct support fire unit. The battery commander and forward observation

officers from the battle group's direct support battery have the capability of controlling the fire of many other fire units at priority call or in support.

4. **In Support**. A field artillery fire unit in support of an arms unit provides fire support to the arms unit but not on priority. Although fire is not guaranteed, the degree of assurance that fire will be provided is high. Although the fire unit may have a priority task assigned by a superior commander, that task should not normally conflict with the support requirements of the supported arms unit. Liaison, observation and communications are not usually provided by fire units placed in support.

222. FIRE PLANNING PROCESS

1. Responsibility for the preparation of the fire plan rests with the tactical commander. Early in the formulation of his tactical plan he should consult with his artillery advisor and confirm that the tactical plan is supportable with available fire support resources. His outline fire plan should include:

   a. the concept of operations;

   b. the aim of the fire plan and its major component parts; and

   c. where, when and for how long fire is required.

2. The artillery advisor considers the tactical plan and the outline fire plan and recommends changes as required. In more detail the tactical commander assisted by the artillery advisor confirms the following:

   a. the employment of all weapons such as mortars, artillery, close air support, tank guns, naval gunfire and armed helicopters;

   b. precise target areas, target numbers and nicknames;

   c. timings including H-hour if applicable;

   d. employment of special munitions such as smoke;

   e. deployment and allocation of observers;

   f. authority and plans for modifying the fire plan should the need arise;

   g. signals and control measures; and

   h. adjustment for accurate fire and the need for surprise.

223. CO-ORDINATION MEASURES

1. General. The following surface fire co-ordination measures are used:

   a. boundaries;

   b. fire support co-ordination line;

   c. no fire line;

   d. restrictive fire line; and

   e. fire co-ordination area.

See Figure 2-2 for an illustration of surface fire co-ordination measures and the manual, The Army, Chapter 12 for information on airspace control measures.

2. **Boundaries**. Boundaries extend into enemy territory and establish the limits for co-ordination. Fire, or its effects, may not be directed across a boundary without co-ordination with forces on the other side.

3. **Fire Support Co-ordination Line (FSCL)**. This is a line established by the land force commander, normally at corps, to ensure co-ordination of fire which while not under his control, may affect current operations. Supporting forces may engage targets beyond the FSACL without prior co-ordination with the land force commander, provided that the attack does not produce adverse surface effects short of the line. Attacks against surface targets short of the FSCL must be coordinated with the land force commander.

4. **No Fire Line (NFL)**. This is a line, established by formations below corps, short of which fire may not be brought to bear except on approval of the formation commander. Beyond this line, firing is possible without danger to friendly troops. Beyond respective NFLs, formations may direct fire across unit boundaries.

5. **Restrictive Fire Line (RFL)**. This is a line established by a superior headquarters to co-ordinate fire between airborne, airmobile, or amphibious forces and link-up forces, or between any converging friendly forces. It is used to co-ordinate direct and indirect fire. All fire, with effects extending beyond this line, must be coordinated with the forces on the other side. Within the context of fire support co-ordination, a handover line is an RFL.

6. **Fire Co-ordination Area**. This is an area with specified restraints into which fire, in excess of those restraints, must not be delivered without the approval of the commander who established the area.

(224 to 299: Not allocated)

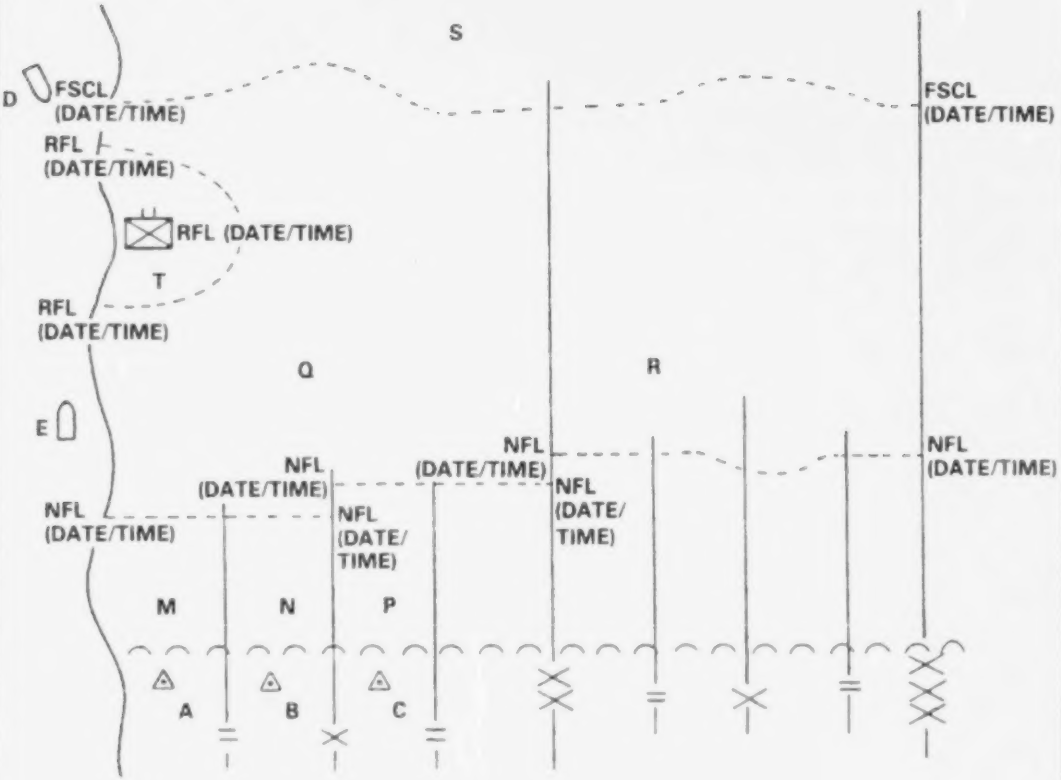
S
D
FSCL
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Figure 2-2 Surface Fire Co-ordination Measures

CHAPTER 3

OFFENSIVE OPERATIONS

CHAPTER 3

OFFENSIVE OPERATIONS

SECTION 1

INTRODUCTION

301. GENERAL

1. Offensive operations are conducted for any of the following reasons:

   a. to defeat, erode or repulse enemy forces;

   b. to gain or re-capture ground;

   c. to acquire information;

   d. to deprive the enemy of his resources;

   e. to fix the enemy in place and thus prevent him reinforcing another force; and

   f. to divert the enemy's attention from other areas of activity.

302. PRINCIPLES OF WAR

1. In offensive operations the key to success is maintenance of momentum which is achieved by seizing and retaining the initiative. Other principles of war of particular concern during the planning and conduct of offensive operations are described in detail in the manual Land Formations in Battle. These are:

   a. Offensive Action;

   b. Concentration of Force;

   c. Surprise;

   d. Security; and

   e. Flexibility.

2. The fundamentals of offensive operations are:

   a. **Shock Action**. Tanks, mechanized infantry and fire support must be boldly employed to break enemy defences and drive deep into the enemy's rear area.

b. **Depth**. The battle group commander must organize his forces and select his objectives in depth if he is to maintain constant pressure and exploit penetration of enemy defences. Organizing in depth contributes to shock action.

c. **Balance**. The initial grouping must ensure that combat power can be concentrated when and where it is most needed.

d. **Simplicity**. The battle group commander's plan must be kept simple to ensure flexibility and responsiveness during its execution. Complex manoeuvres and intricate arrangements lead to confusion and misunderstanding. A clear concept of operations supported by a simple plan gives combat team commanders an opportunity to apply their own judgement and initiative in response to changes in the local situation.

e. **Information Gathering**. The battle group. commander must have detailed knowledge of the enemy situation and terrain.

f. **Reserves**. A reserve must be retained to deal with the unexpected and to exploit success. Once committed a new reserve must be constituted. Committing his reserve is the most important decision a battle group commander must make. Once the battle group is fighting through the objective, it remains the only way in which he can influence the battle.

3. Offensive operations include:

a. **Advance to Contact**. In an advance to contact, a force seeks to gain or re-establish contact with the enemy under favourable conditions. The advance to contact covers the movement forward before contact has been made. It ceases when determined enemy opposition is encountered, normally in his main defence area. The advance to contact is characterized by swift mobile actions that destroy enemy mobile detachments and forward positions in the security zone.

b. **Attack**. The attack is used to defeat the enemy or to seize ground. It can be conducted as a hasty or deliberate attack. The hasty attack is conducted to take advantage of an unprepared or weak enemy. The deliberate attack is necessary when enemy strong points are encountered that prevent further advance either with bypassing or hasty attacks.

c. **Pursuit**. The pursuit may follow a successful penetration of the enemy's main defence area through a series of hasty attacks, resulting in a crumbling of his defence, or it may follow the success of a deliberate attack on a strong point(s) resulting in exploitation. When the enemy's defensive framework has been shattered and he is forced into a running, non-coherent defence, the advance has developed into a pursuit.

4. These operations are discussed in subsequent sections. Obstacle crossings may be undertaken as part of the above operations; consequently, they are Considered in Annexes A and B to this chapter.

303. THREAT

1. **General**. The Fantasian Army believes that battles are never won by remaining on the defensive. Defence, at all levels of command, is regarded as a temporary expedient that is always followed by a renewed offence. Reasons for defence include:

   a. to consolidate gains;

   b. to await reinforcement when temporarily halted during the offence;

   c. to protect threatened flanks;

   d. to regroup and detach forces to another formation which is succeeding;

   e. to reconstitute the formation or unit after sustaining heavy casualties;

   f. to await resupply when over extended; and

   g. to block a major enemy counter-attack.

2. **Fundamentals**. Fantasian doctrine emphasizes two fundamentals of defence:

   a. **Stability**. The defence is structured in depth so that strong enemy attacks can be repulsed.

   b. **Activeness**. The defending force always attempts to wrest the initiative from the attacker.

3. **Elements of the Defence**. Fantasian defence includes:

   a. **Security Zone**. Forces assigned to the security zone are tasked to delay and deceive the enemy as to the strength and location of the main defensive position. Forces in this zone consist of two elements -

      (1) a screen, usually based on reconnaissance forces, and

      (2) a guard, usually reformed from forward detachments or advance guards; and

   b. **Main Defence Area**. It consists of a complex series of interlocking strong points which cover "fire sacks" - ie, killing zones - and around which tank and anti-tank reserves manoeuvre.

4. **Defence at Company Level**. Generally a company defends with its three platoons in line as part of a one or two echelon battalion defence. See Figure 3-1. Typical dimensions of a company position in defence are up to 1500 m in width and 500 m in depth. Its three platoons are normally deployed in a staggered line with the centre platoon slightly to the rear of the flanking platoons. A typical platoon frontage is up to 400 m with a depth of 150 m. Intervals between platoon positions are usually 150 m. Each section prepares a zig-zag trench line of up to 100 m in length. The section itself may occupy only a 30 m portion of the trench so the unmanned parts provide relatively well protected lateral and rearward movement within the position. The position is dug in and fortified to the best extent possible given the time and resources available. If possible, the section prepares alternate positions. The positions will be covered by mixed minefields, and non-explosive obstacles. As well, tanks will be dug in on or near the position. The APCs will invariably be dug in on the positions, normally 50-100 m behind the trench lines. The company holds no reserve. Its parent battalion may, however, hold a motor rifle platoon in reserve. In addition all BTR battalions use their anti-tank platoon as a special anti-tank reserve. Reserve slope positions are preferred, and an area out to 500 m in front of and around the position is cleared of visual obstructions to ensure clear fields of fire. Extensive artillery support, planned well in advance, can be expected. As well as its own 120 mm mortar the battalion can rely on eighteen 122 mm howitzers in direct support and regimental and divisional artillery can be superimposed.

304. FORMS OF MANOEUVRE

1. Offensive operations may be directed at the front, flank or rear of the enemy. At divisional level and higher the forms of manoeuvre are frontal, penetration, turning movement and envelopment which includes the rear and flank attacks. These forms of manoeuvre, illustrated at Figure 3-2, are amply described in the manual, Land Formations in Battle.

2. At battle group level the most common forms of manoeuvre are the frontal and flank attacks:

   a. **Frontal**. The main effort of this form of manoeuvre is directed against the front of an enemy position. It can be effective against a weak, disorganized enemy, and it may be used to overrun and destroy him or to fix him in position. Unless supported by a heavy weight of fire, from within the battle group or by adjacent units, it may not be successful, and even if successful, it may result in an unnecessarily high number of casualties. The battle group commander must consider the disadvantages before executing a frontal attack.

   b. **Flank**. Flank attacks aim at surprising the enemy by striking at a vulnerable point where his concentration and firepower can be avoided. At battle group level this is the preferred attack.

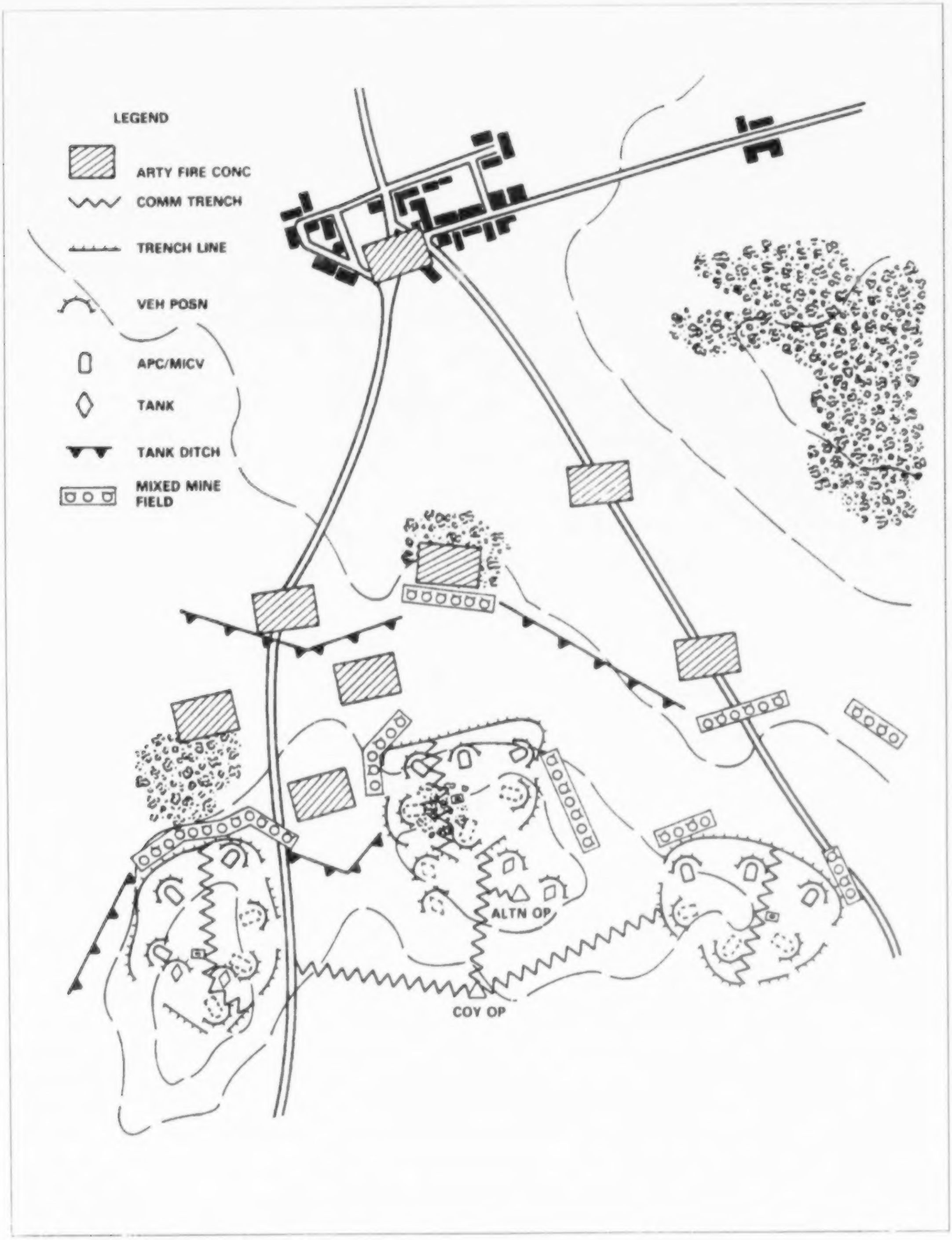

LEGEND
ARTY FIRE CONC
COMM TRENCH
TRENCH LINE
VEH POSN
APC/MICV
TANK
TANK DITCH
MIXED MINE FIELD
ALTN OP
COY OP

Figure 3-1 Fantasian Company Defensive Position

305. FIRE PLANNING

1. The aim of an offensive fire plan is to destroy or neutralize the enemy before and during an attack. The tactical commander should keep his artillery advisor aware of tactical developments as they occur and include him in his planning efforts from the outset. Such co-operation will usually result in fire support being planned concurrently with the manoeuvre and other tactical plans. Such concurrent activity will usually result in fire support being organized and ready when the tactical commander requires it.

2. **Co-ordination**. The tactical commander should ensure that his artillery advisor fully understands the detailed tactical plan. In particular and as examples, the advisor should know:

a. the form of the operation to include routes axes, phases, objectives boundaries, assault and attack positions, order of march, and reorganization plans;

b. known and suspected enemy positions that are confirmed or potential targets;

c. timings, to include H-hour;

d. troop safety requirements to include distances at which fire should be lifted from objectives;

e. adjustment for accurate fire and the need for surprise; and

f. the need for DF during reorganization or while in assembly areas, hides or harbours.

306. CONTINUOUS FIRE SUPPORT

1. During advance or withdrawal a fire plan to provide continuous fire support throughout the move should be prepared. The plan could consist of planned on call targets along the intended route or axis. Selection of targets should be based on known or suspected enemy positions. Once selected such targets should not for security and safety reasons be used as reference points or for reporting locations.

307. PLANNING THE USE OF SMOKE

1. The tactical commander informs his artillery advisor:

a. the area or enemy position to be blinded;

b. the area or friendly position to be screened;

c. when the screen is to be effective;

d. an estimate of how long the screen will be needed; and

e. whether the need for surprise allows the use of smoke testers before the screen is produced.

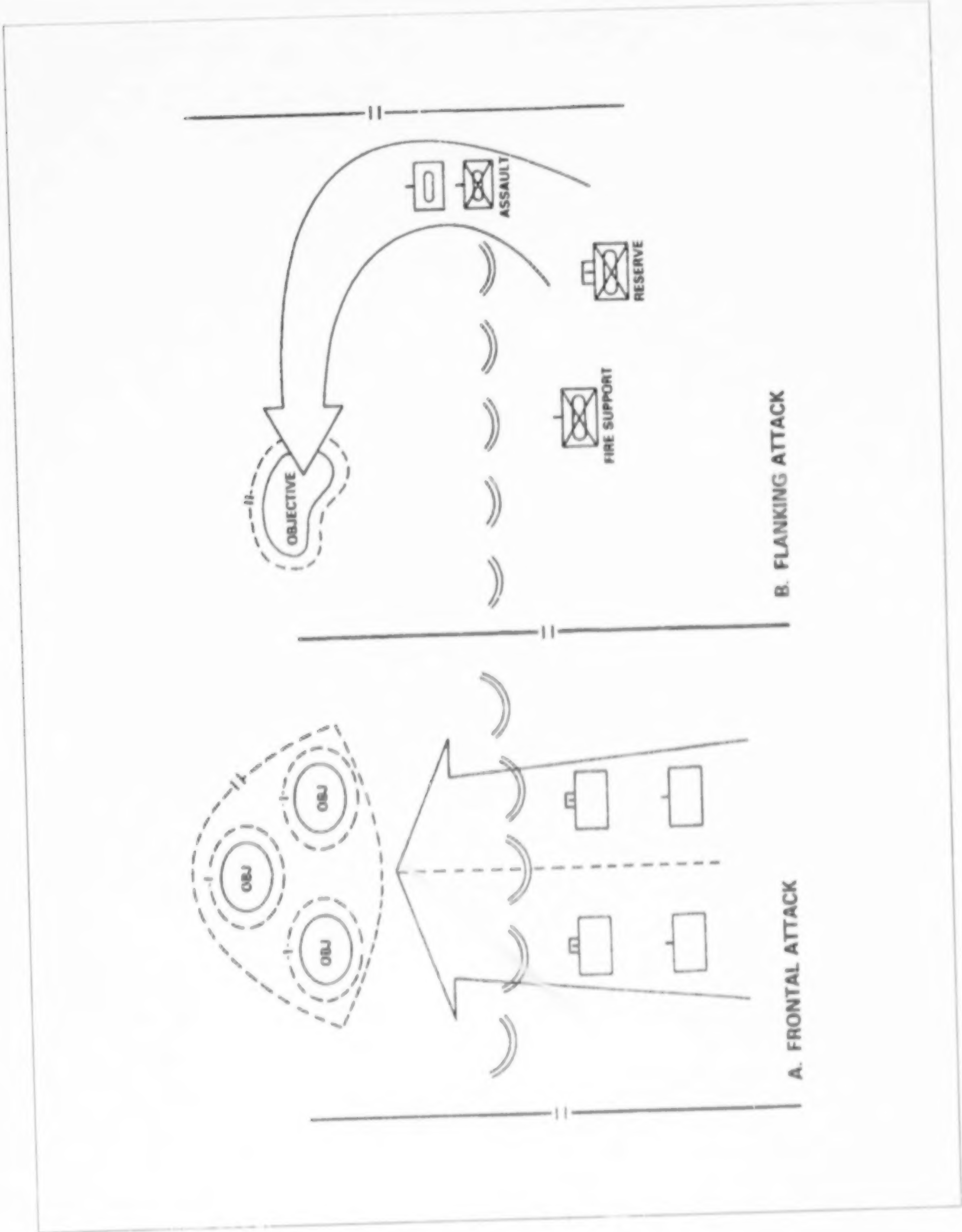

A. FRONTAL ATTACK
OBJ
OBJ
OBJ
B. FLANKING ATTACK
OBJECTIVE
FIRE SUPPORT
RESERVE
ASSAULT

Figure 3-2 Battle Group Form of Manoeuvre

SECTION 2

ADVANCE TO CONTACT

308. GENERAL

1. The advance to contact usually includes wide-ranging reconnaissance to gain or re-establish contact. The lead battle group is organized to move swiftly into action once contact has been made.

2. As an integral part of the formation plan, the battle group's aim is to achieve one of the following:

   a. defeat the enemy; or

   b. seize key terrain.

3. Once contact has been made the formation commander tries to move his forces more rapidly than the enemy can counter the advance. He does this by advancing on a narrow front with a single battle group leading. If one battle group is stopped by a well prepared defence the advance will likely continue elsewhere with a number of battle groups leading.

4. At formation level the advance to contact is organized into the following elements:

   a. covering force;

   b. advanced guard;

   c. main body; and

   d. protective elements.

5. It is led by a covering force seeking to define enemy strength and locations and prevent unnecessary delay of the main body. Forward elements maintain momentum, bypassing pockets of resistance and leaving them for follow-up elements. The formation commander wants to exploit weak points in the enemy defence, to surprise him and to keep him off balance. An advance to contact ends when the enemy resistance has increased to the point where the deployment and coordinated effort of the entire formation is required.

6. This section describes the planning and conduct of the advance to contact by one battle group forming the advanced guard of a formation. Although not dealt with in detail, the need for close co-ordination and mutual support between all battle groups within the formation must not be forgotten.

309. FUNDAMENTALS

1. Fundamentals relevant to the advance to contact and additional to those outlined in article 302 are:

   a. **Maintain of Momentum**. Momentum is created by the advancing force employing quick aggressive actions designed to bypass or attack the enemy. Reconnaissance troops, including engineers, operating well forward of the advancing force identify enemy positions and obstacles, and seek bypasses to maintain the momentum of the main body.

   b. **Control Key Terrain**. Vital ground and other key terrain to the enemy's defence should be seized and held. These include dominating ground, bridges, defiles, or built-up areas that serve as choke points.

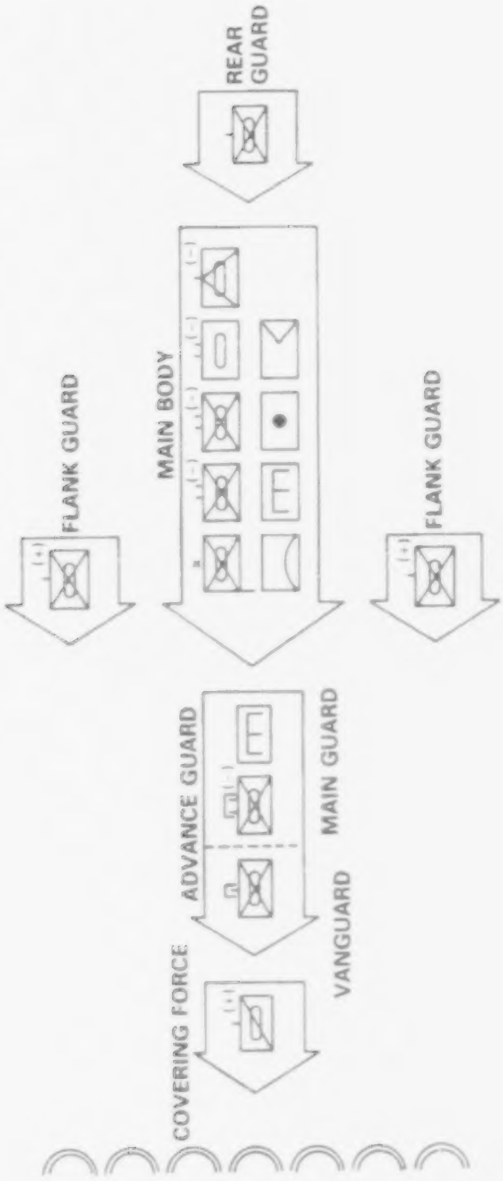

REAR GUARD
FLANK GUARD
MAIN BODY
FLANK GUARD
ADVANCE GUARD
MAIN GUARD
VANGUARD
COVERING FORCE

Figure 3-3 Formation Advance to Contact

310. ORGANIZATION

1. The commander divides his force into four elements:

   a. **Reconnaissance -**

      (1) **Grouping**. The battle group reconnaissance element consists of the reconnaissance troop/platoon. It may include a Forward Observation Officer (FOO) and/or Fire Controller (FC), engineer reconnaissance party and possibly long range anti-armour weapons (LRAAWs).

      (2) **Command and Control**. The reconnaissance element is commanded by the battle group headquarters but may be placed in support of the leading sub-units when the battle group is advancing on two or more axes. In either case, regrouping may be necessary once contact is made.

      (3) **Tasks and Method of Operation**. The reconnaissance element screens the battle group advance and conducts route reconnaissance forward of the vanguard.

   b. **Vanguard -**

      (1) **Grouping**. The vanguard may be an armoured squadron or, in close country, a mechanized company, or both. It may have LRAAW/MRAAWs in support and should be supported by a FOO, FC, engineer reconnaissance and armoured engineers.

      (2) **Method of Operation and Tasks**. The leading sub-units manoeuvre astride their axis. They are close enough behind the reconnaissance element to react quickly to support their advance but not so close as to jeopardize their freedom of manoeuvre when contact is made.

   c. **Main Body**. The main body consists of battle group headquarters, uncommitted sub-units, support weapons, supporting arms, and A1 Echelon. Sub-units move tactically dispersed, as directed by battle group headquarters, between waiting areas selected off the map and cleared by reconnaissance or the leading sub-units.

   d. **Protective Elements -**

      (1) **Grouping**. Protective elements may be a screen or a guard deployed to the front, flanks or rear. Guards are based on the reconnaissance troop/platoon with a FOO and possibly LRAAW, tanks or tank destroyers (TDs). In close country, guards may be composed of infantry.

      (2) **Method of Operation and Tasks**. The protective element moves tactically, conducting wide surveillance, occupying ground of tactical

importance and preparing to react to enemy contact. Its activities are coordinated with the advance guard and the main body. The protective elements operate under command of the battle group.

2. Examples of battle groups deployed as advanced guards are shown in Figure 3-4.

311. FORCES AND TASKS

1. To get the most effective performance from the troops available the commander considers the following:

a. **Armour and Infantry**. Employment of tanks and infantry is determined by the following -

(1) In open terrain, tanks lead with infantry in APCs a bound behind.

(2) In mixed terrain, tanks and APCs move as a group but with the tanks leading. The infantry provide support and security to the tanks by clearing terrain features and enemy positions as required. Quick action by tanks and infantry together allows the advance to continue without serious delay.

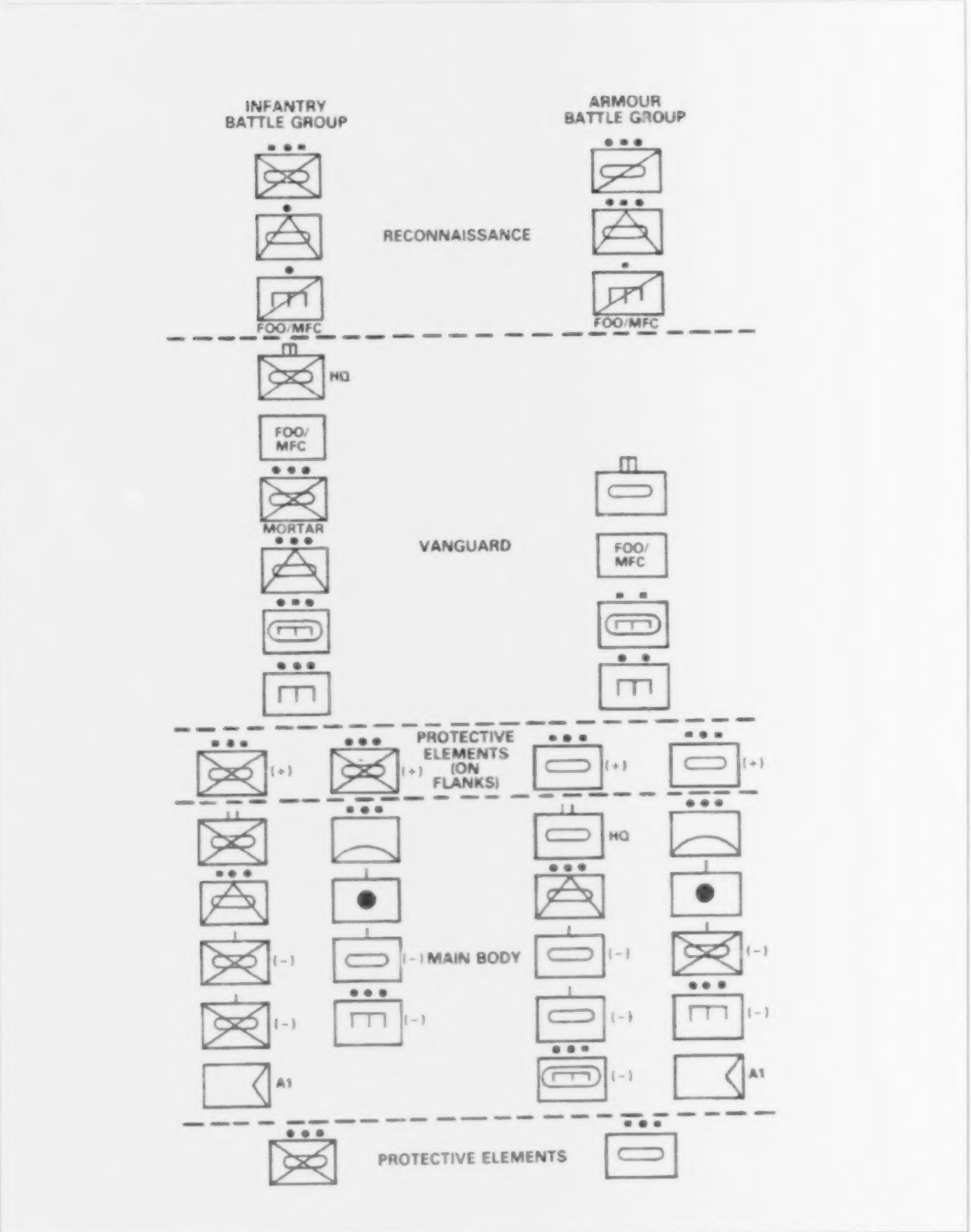

INFANTRY BATTLE GROUP
ARMOUR BATTLE GROUP
RECONNAISSANCE
FOO/MFC
FOO/MFC
HQ
FOO/ MFC
MORTAR
VANGUARD
FOO/ MFC
PROTECTIVE ELEMENTS (ON FLANKS)
(+)
(+)
(+)
(+)
HQ
(-)
(-)
MAIN BODY
(-)
(-)
(-)
(-)
(-)
(-)
(-)
A1
A1
PROTECTIVE ELEMENTS

Figure 3-4 Examples of Infantry Heavy and Armour Heavy Battle Groups Employed in the Advanced Guard

(3) In close terrain infantry lead on foot with tanks in intimate support.

b. **Anti-Armour**. LRAAWs and TDs can support movement of the forward and flanking elements.

c. **Artillery**. Mortars and supporting artillery are deployed forward with FOOs and FCs located with leading sub-units. On-call target procedure is used with mortars dealing with close-in targets while artillery fires at targets in depth. Both mortars and artillery are prepared to provide continuous fire. A larger quantity of smoke ammunition is used in the advance, especially where terrain is mostly open.

d. **Air Defence**. The organization of air defence and the policy for engagement is established by formation headquarters. Battle group air defence weapons are used to cover defiles and gaps/lanes in obstacles, with any spare capacity devoted to waiting areas. However, the battle group's principal defence from enemy air attacks is passive, using concealment and dispersion.

e. **Engineers**. Armoured engineers, must be well forward with engineer reconnaissance parties moving with leading sub-units. Early identification of obstacles and an assessment of equipment required to breach them is critical, since heavy equipment takes time to put in position. Depending on the type and number of obstacles expected, the pioneer platoon may augment the engineers or substitute for engineer reconnaissance, when there are no engineers in the grouping.

f. **Air and Aviation**. While air and aviation resources are seldom placed under the direct control of the battle group, they frequently support the battle group and therefore must be integrated into the plan. Forward air controllers will collocate with the FSCC to control allocated air sorties and close air support. Aviation resources may include attack helicopters (AH) for anti-armour tasks, light observation helicopters (LOH) for reconnaissance and air OP tasks, utility aircraft for resupply, evacuation, and movement, and medium transport helicopters (MTH) for transporting all or part of the battle group.

g. **Administration -**

(1) The following measures are considered:

(a) the advance begins with all fuel tanks full and vehicles carrying maximum reserves;

(b) sub-units are prepared to replenish by day or by night as the opportunity occurs; and

(c) use is made of captured stocks.

(2) The normal medical evacuation system employing road transport may be difficult because of congestion on main supply route and the destruction of bridges, culverts, and defiles on minor routes. Helicopters, when available, should be considered as a means of evacuation from unit medical stations to medical treatment facilities in the rear area.

312. ESTIMATE

1. Analysis of his commander's concept of operations and his assigned tasks leads the battle group commander to the definition of his aim. He must be clear as to whether the security of the main body or maintenance of the momentum is paramount. Having determined his aim, he considers enemy, ground, meteorology, time and space and assessment of tasks. From this analysis the CO makes deductions concerning his:

a. manoeuvre plan;

b. objectives;

c. bypass policy;

d. fire plan;

e. command and control; and

f. communications.

2. **Frontage**. The advance is greatly influenced by the task, the security and momentum required, boundaries and the number of routes available. An advance on one route creates a narrow front which eases control and concentrates force which may result in greater Momentum. Advancing on one route may also permit the enemy to concentrate and impose greater delay. On the other hand, deployment over a broad front on two or more routes may force the enemy to disperse his resources. It may however, demand a more restrictive bypass policy for the lead combat teams because of the lack of troops in depth to deal with bypassed enemy, and it may increase the requirement for flank security.

3. **Objectives**. The brigade commander designates the battle group objective. The CO allocates sub-unit objectives based upon consideration of his mission, the enemy, and terrain. He may not be able to make this allocation until the latter stages of the advance to Contact.

4. **Bypass Policy**. While the commander normally imposes a bypass policy, the CO must establish the policy for the lead combat teams. It should be as liberal as possible leaving bypassed enemy to be destroyed by the troops in depth or other units. In general, a bypass policy depends on the degree to which bypassed enemy can interfere with the cohesiveness of the operation. A bypass policy must indicate the size of enemy force which may be bypassed, whether or not it must be picketted by the lead or sub-units in depth and must also detail responsibility for the subsequent action. The following points must be considered when bypassing:

a. Precise information on the location and size of the bypassed enemy must be passed to all concerned.

b. The bypassed position must be kept under observation.

c. The bypassed position must not be able to seriously interfere with following elements. This may necessitate positioning a guard element to ensure no interference occurs.

5. **Fire Plan**. The Brigade Commander's continuous fire support programme includes indirect fire on call on likely targets along the axis. These targets are used as the basis for covering or defensive fire tasks. During the operation, some guns are laid on targets immediately ahead and to the flanks of the advance guard to provide rapid response to requests for fire. The guns are adjusted automatically onto new targets as the advance progresses and as they come within range. The CO may have to plan and request additional targets along his routes.

6. **Command and Control**. The CO is well forward in his tactical command post, behind the lead combat teams. He may move to where he can observe the action himself, for only then can he properly assess the battle. He regulates the rate of advance using control measures such as, report lines, boundaries, waiting areas, and objectives.

7. **Communications**. Usually the emission control policy is limited to radio silence, as most electronic emitters, such as surveillance radars, target acquisition radars and laser designators, must continue to operate. Normally radio silence is imposed until first contact with the enemy. If it is then lifted for the entire force, control is simplified and the rate of advance may be quicker, however, surprise may be lost. If it is lifted for each element as they make contact, the reverse is true. In general, radio silence should not be lifted for the entire force until a commander is sure that the element of surprise is no longer a factor. While radio silence is in effect dispatch riders and liaison officers are used. Information may also be passed through meetings at predetermined times and locations.

313. MANOEUVRE

1. The grouping, order of march, and the type of advance adopted, is decided by the battle group commander. Where the need for speed is paramount, and the likelihood of contact with the enemy is negligible, manoeuvre may be abandoned and the leading elements may execute a continuous but tactically dispersed advance. A very rapid advance can thus be achieved, but adequate dispersion and quick reaction, including immediate indirect fire support, are essential if

excessive casualties are to be avoided on any unexpected contact.

2. At the other extreme, once contact has been made or is considered imminent, all movement must be covered by the maximum weight of direct and indirect fire, including speculative fire against likely enemy positions.

3. Between these two extremes, various compromises are possible. All leading elements may move simultaneously, but pause for observation on each bound. Complete sub-units may move together, but covered by the fire of other sub-units.

314. ACTION ON CONTACT

1. The action to be taken on initial contact depends on the aim, formation bypass policy and enemy situation. Reconnaissance detachments and leading sub-units must always be prepared to immediately exploit any opportunity to surprise the enemy or make a hasty crossing of an obstacle. Immediately after contact is made the reconnaissance element should:

a. determine and report the strength and disposition of the enemy and the location and nature of any obstacles;

b. call for direct and indirect fire support;

c. manoeuvre to locate the enemy's flanks and any gaps in his positions or obstacles to permit his positions to be bypassed or taken from the flanks or rear;

d. if permitted, outflank the enemy and continue the advance; and

e. picquet the enemy.

2. The leading sub-unit assists in the reconnaissance of the enemy positions and obstacles, and then, depending on the enemy strength and the battle group commander's orders:

a. bypasses the enemy and continues the advance;

b. mounts a hasty attack to destroy the enemy or seizes his positions; or

c. engages the enemy with fire either to permit another sub-unit to bypass or in preparation for a battle group attack.

315. ADVANCE TO CONTACT IN CONDITIONS OF REDUCED VISIBILITY

1. The battle group may conduct operations at night or with poor visibility to achieve the following:

a. surprise;

b. maintain momentum; or

c. respond the enemy action.

2. By night or in reduced visibility, more reconnaissance is required forward as well as on the flanks. The enemy covers the obvious roads and tracks. Therefore, minor tracks and trails through wooded areas are used. This makes good map reading (navigation) important. Bounds and phase lines are at shorter intervals to assist control.

3. Maintaining the advance by day and night is tiring and troops require rest or at the very least, relief from demanding tasks such as driving, operating surveillance devices, radios and navigating.

4. The enemy employs a wide variety of night observation equipments and night weapon sights. When contact is made, use of white light and smoke may assist in defeating the enemy's night observation devices. The advancing force uses only passive observation means until contact.

316. MEETING ENGAGEMENT

1. This occurs when moving troops, meet the enemy at an unexpected time and place. It differs from the advance to contact in that contact with the enemy occurs unexpectedly.

2. Meeting engagements at battle group level are characterized by a shortage of information about the enemy and the limited time available for the battle group commander to assess the situation. Battle groups must be aware of the possibility of having to respond to a meeting engagement while moving on the battlefield.

3. Planning and organization is similar to that for the advance to contact. If the enemy is met the options for dealing with him are similar to those for the advance to contact, bypass, mount hasty attack, defend, delay or withdraw.

SECTION 3

ATTACK

317. GENERAL

1. An attack is launched to seize ground and to destroy the enemy's capability to resist. A battle group normally conducts an attack as part of a brigade operation, but it may conduct an attack as a separate operation, such as a hasty attack when suddenly encountering the enemy. An attack may be necessary to conduct reconnaissance, to deceive the enemy, to relieve pressure on friendly forces, or to seize the initiative in an advance to contact.

2. An attack is conducted with maximum shock action. This involves the coordinated participation of armour, infantry, artillery and supporting troops.

318. TYPES OF ATTACK

1. Attacks may be either hasty or deliberate. The circumstances indicate the type of attack and commanders decide which is appropriate and issue orders.

2. **Hasty Attack**. This type of attack is characterized by trading preparation time for quick action. To maintain momentum or retain the initiative, minimum time is devoted to preparation. The battle group commander attacks with a combination of boldness, surprise and speed to disrupt the enemy's preparations and take advantage of his weakness. A hasty attack is normally launched off the axis of advance and relies primarily on SOPs and drills.

3. **Deliberate Attack**. Deliberate attacks are characterized by the need to regroup and redeploy forces usually because the enemy is in a well-prepared position. This takes time which allows for other concurrent activities such as the collection of intelligence, and preparation for battle.

319. CONCEPT

A battle group attack isolates the objective by suppressing the enemy and by concentrating forces at the critical time and place.

320. STAGES OF THE ATTACK

1. The three stages of an attack are mounting, assault, and consolidation. Although these stages are sequential, they are not separate. The mounting stage includes preparations which occur before H-hour. The assault stage begins as the assault element crosses the line of departure, includes breaking into the enemy defensive position and concludes with fighting through the objective. The consolidation stage involves the preparations to meet the enemy counter-attack, to finalize administrative requirements, and to start the battle procedure for the next task. The consolidation stage may actually begin before the fighting through has finished. The activities during the stages of an attack are summarized in the chart at Annex C.

2. **Mounting Stage**. The battle group commander considers the following activities during the mounting stage: locating, defining and picketing of the enemy, preparations for battle, fire support, direct fire support, protection and security, and a reserve.

a. **Locating and Defining the Enemy**. The battle group commander uses his own intelligence and reconnaissance resources and those available to him at formation level. It is vital that reconnaissance of the enemy position begin as soon as possible and continue throughout the assault. The battle group commander responds to information received after he has given his orders and he is prepared to alter his plan if necessary. A great deal of information may be provided by troops in place or by adjacent forces. The commander may assign specific tasks to his battle group reconnaissance elements, or to engineer reconnaissance or pioneers. The battle group commander tries to fix the enemy by first locating their weapons, trenches, and obstacles. He then coordinates direct and indirect fire to neutralize any enemy who could otherwise influence his manoeuvre. In this way the battle group commander attempts to isolate the enemy position and choose the point of main effort.

b. **Preparation for Battle**. Activities include rehearsals, improving routes, preparing for the crossing or breaching of obstacles, moving to assembly areas, grouping, replenishing, initiating the fire plan, deploying, conducting a forward passage of lines or infiltrating. Good SOPs and such things as well-practised marrying-up drills permit a force to prepare more quickly than the enemy expects and may contribute to achieving surprise. It is also important for the battle group commander to plan his administration requirements, especially ammunition, to ensure that there are stocks available.

c. **Indirect Fire**. Our manoeuvre relies on indirect fire to isolate the objective and neutralize the enemy. A battle group may be allocated either additional fire units or additional quantities and types of ammunition to support an attack. Field artillery, mortars, rockets and naval gun fire are incorporated, as available.

d. **Fire Base**. A fire base provides direct fire support for the assault element and security for the troops in the fire base. The base is created during the mounting stage, if the enemy and the group permit, otherwise it will be formed during a subsequent phase of the assault. It is sited to isolate the objective, suppress the enemy and destroy selected targets. All direct fire weapons, including ATGMs, APC cannons and HMGs, are employed in a fire base; however, tanks are best suited to the task. Once supporting fire is no longer effective or is masked by the assault element, the fire base assumes its tasks in the next phase of the operation. It is preferable to site a fire base at an angle to the axis of advance but this may not be possible if the proposed fire base is enfilade to the enemy. Then the fire base may be sited so that its fire goes over the heads of the assault element, keeping in mind the possible danger to our own dismounted infantry from discarding Sabot pots. If the enemy adopts a reverse slope position, it may be difficult or impossible to establish a fire base. If this situation occurs, then the battle group commander will use indirect fire to isolate and suppress the enemy in coordination with the direct fire from the assault element itself.

e. **Protection and Security**. The battle group commander ensures the protection and security of his force throughout the attack. This includes taking passive and active defence measures, such as camouflage, air defence, and EW. Some elements of the battle group will have to be tasked to secure routes forward from the assembly area and the line of departure and to protect flanks. If a battle group is conducting the assault as part of a formation attack, it is likely that other units will be tasked to provide flank protection, a fire base, and a secure line of departure. This necessitates coordination during the mounting stage and liaison throughout the assault.

f. **Reserve**. The commander assesses the requirement for a reserve in relation to his combat power. For risky operations the commander may assign a quarter or more of his force as reserve. In other situations the commander tasks elements as reserve for a particular phase, even if they are committed in a previous or subsequent phase. An example is tasking the fire base as reserve after the break-in. The fire plan should include a reserve of artillery and mortar ammunition as detailed by successive levels of command.

3. **Assault Stage**. In this stage the troops cross the line of departure, break into the enemy position, and fight through the objective. The battle group can expect obstacles even when they are not apparent. The break-in element is organized to overcome minor obstacles as it fights through the objective. The assault is carried out as quickly as possible to take advantage of the shock action of tanks and massed infantry. Movement is covered with fire. It is during this stage that the isolation of the objective and suppression of the enemy are most important. The commander chooses his break-in point and concentrates his force to achieve the penetration. This is also the time when troops are most exposed to the enemy's direct and indirect fire:

a. **Break-in**. The assault element may have to use fire and movement from the line of departure to the break-in point. Obstacles encountered must be quickly breached or by-passed and left for engineers - following the assault element. Although the tanks have a limited capability to clear simple minefields, the breaching of complex obstacles needs armoured engineers. Tanks form a part of a special breaching force and the armour commander is usually the designated commander. The break-in element consists of tanks, infantry, and armoured engineers, with FOOs and FCs. The infantry remain mounted to take advantage of the speed and protection of the APC, to follow their supporting fire more closely and thus achieve the concentration of force required on the objective. If the infantry vehicles carry a suitable weapon then they can contribute to the fire plan. If the APCs do not carry a fire support weapon, then they stay behind cover, but are ready to move forward quickly as the leading tanks break through. In either case it is critical that tanks and infantry break-in together. The battle group commander is ready to exploit unexpected success in achieving a breach and he keeps a reserve ready to reinforce stalled efforts which he deems most likely to succeed. Considering the factors affecting the breaching, such as the terrain, manoeuvre plan, fire support, clearing capability, and ability to dominate the breaching area, the accepted planning guidance is at least one lane per combat team having attempted two, and at least two lanes per battle group having attempted more. Once through the obstacle, tanks lead the infantry through the objective; but, tanks are vulnerable here and the infantry must move with the tanks, fighting together as a team. The armour commander designates tanks to suppress enemy infantry on the objective, while other tanks engage distant enemy tanks.

b. **Fighting Through**. This describes the action by the infantry and their supporting elements to seize the objective. It includes killing or capturing the enemy and controlling the area. The infantry attempts to dismount as close to the objective as possible to take advantage of the covering fire. Tanks have four main tasks during this part of the battle: to lead the infantry; to fight through with the infantry to suppress enemy infantry and destroy their anti-tank systems; and to defeat counter-attacks. Tanks in the assault force are organized so that all of these tasks can be accomplished simultaneously or sequentially. The tank commander remains responsive to requests for support from the infantry. Tanks use fire and movement in front and beyond the objective to achieve concentration and support the infantry. Indirect fire is critical in maximizing this concentration of force. If the APCs have a fire support capability, they will augment or replace the tanks. The infantry clear trench systems of the enemy by fighting totally within the trench or assaulting on a wider front from trench line to trench line, supported by the neutralizing effects of indirect fire and the suppressive effects of direct fire.

4. **Consolidation Stage**. Consolidation may begin even as fighting through is still in progress. Consolidation is complete when the enemy within the objective area has been killed or captured, a hasty defence has been achieved and the attacking force is ready to repel a counter-attack or to be assigned a new task. Consolidation is normally conducted beyond the objective area, but the nature of the terrain and distant enemy reaction may result in the infantry preparing the former enemy position for defence.

5. **Exploitation**. This is not a stage of the operation but an attack frequently creates opportunities to maintain pressure on the enemy and to maintain the initiative in keeping with the superior commander's plan. Exploitation disrupts enemy counter-attack preparations, hasty defence preparations, or the conduct of an orderly withdrawal. The battle group commander always plans for the possibility of exploitation, usually making it a phase of the assault stage. Troops assigned to exploitation are balanced and have sufficient artillery and mortar support.

321. PLANNING

1. From the battle group commander's estimate, the following will be decided:

   a. **Phasing**. If there are more tasks than there are troops available to do them, the attack is divided into phases. Among other considerations, availability of fire support may also necessitate phasing.

   b. **Timing of the Assault**. This is usually given in the formation commander's order, "capture objective APPLE by 0600 hours". Notwithstanding such direction, the commander must strike a balance between the time required for preparations and the time he allows the enemy to strengthen his defences. Since the assault is a platoon and section commander's fight, the time taken for higher level battle procedure should be minimized to allow more time for the lower level commanders to plan and coordinate their battle.

   c. **Form of Manoeuvre**. The battle group commander selects the form of manoeuvre by considering the mission, enemy strength and disposition, terrain, weather, troops and resources available, and time and space. Once across the line of departure, the assaulting troops come under both direct and indirect fire. The opportunity of launching a flanking attack against anything other than an isolated enemy position is rare. A flanking attack may come under enfilade fire from another mutually supporting enemy position. The commander relies on the effectiveness of his direct fire support to suppress the enemy in these supporting positions, so that flanking movements may be used without suffering heavy casualties.

   d. **Assault Formation**. Battle groups can assault on a narrow or broad front. The assault formation is expressed as one up, two up or three up. The formation adopted depends on the mission; enemy strength, disposition, and his anticipated action; cover and space for manoeuvre; and the troops available and their mobility. The assaulting troops should be strong enough to break-in and seize the objective. Assaulting on a narrow front provides greater depth and concentration and it also allows the battle group commander to shift his point of attack quickly. It is easier to control but this formation does reduce the weight of fire power that can be brought to bear initially and it also enables the enemy to concentrate his fire against the assaulting troops.

   e. **Grouping and Tasks**. The battle group commander considers the following tasks when allocating troops for the assault: main assault group including the composition of the break-in element and the troops to fight through the objective; fire base (if possible); protective elements; and exploitation. The commander balances his troops available with this tasks. Tanks are needed more in the assault than in the fire base, or APC cannons may be used to supplement the fire base. The commander judiciously allots troops to tasks. This has command and grouping implications. Infantry and armour cooperation does not always mean creating subordinate command relationships for every tactical situation. The battle group commander may determine that the best way to achieve a certain task is with the combat team, while another task may be better achieved using a company or squadron group. The battle group commander decides the grouping and command relationships; it may be that in the heat of battle, a natural shifting of command between infantry and armour will occur.

f. **Fire Plan**. The battle group commander's fire plan includes all direct and indirect fire weapons. The fire plan is crucial to the assault: it helps decide the battle group commander's assault plan. Annex B provides a useful checklist to assist the fire planning.

g. **Roles and Functions**. A battle group in the attack has at least tanks, infantry and indirect fire support. Additional troops such as engineers, air defence artillery, EW detachment, attack helicopters and close air support may also be available.

2. **Command and Control**. The battle group commander commands from the front where he can influence the battle. Control is decentralized to sub-unit commanders, who are responsible for their part in the overall plan. The tanks and infantry communicate during the assault. They use radio, tank telephone, hand signals and personal liaison. Tank commanders and APC crew commanders (cannon equipped APCs) remain alert to calls for support from the infantry. An assault is a dynamic, always confusing situation when battle is joined and at this point communications usually break down. Good training, well understood drills and rehearsals greatly enhance a commander's ability to command in these conditions. However a simple plan, that is understood by all, usually compensates for any loss of communication (see also Chapter 2).

3. **Control Measures**. The following terms describe the methods of control during the attack:

a. assembly area;

b. attack position;

c. line of departure;

d. assault position;

e. zulu harbour;

f. objective;

g. objective area;

h. consolidation area;

j. limit of exploitation;

k. axis of advance;

m. routes;

n. marked lanes through minefields;

p. boundaries;

q. report lines;

r. coordinating points;

s. phases;

t. phase lines;

u. code words;

v. timings;

w. fire coordination measures; and

x. bounds.

A diagram illustrating common control measures is at Annex E.

4. **Unique Operations**. These include attacks during periods of reduced visibility, infiltration and fighting in built-up areas. These attacks are generally conducted in the same manner but there are some unique considerations that affect planning and conduct.

322. REDUCED VISIBILITY

1. Reduced visibility can be caused by darkness, fog, precipitation, dust, or smoke. Despite the sophistication of night vision devices and weapon sights, both defending and attacking troops are still hampered by reduced target acquisition, engagement ranges and navigating difficulties. Therefore:

a. the defender -

(1) finds it more difficult to cover his front, acquire targets and thus is likely to engage at shorter ranges;

(2) has less warning of an impending attack;

(3) requires more time to deploy his reserve;

(4) must either redeploy or accept some gaps; while

b. the attacker -

(1) has less effective fire support because of difficulties acquiring targets and adjusting fire;

(2) has difficulty in identifying friend or foe; and

(3) moves slower because navigation is more difficult.

2. For the attacker, however, these difficulties may be offset by the opportunity to close with the enemy undetected. Night or other periods of reduced visibility often provide favourable conditions for surprise. An attack during periods of reduced visibility is likely to be a deliberate one. The fundamentals and procedures for such an attack are generally the same as those applicable by day, but with even greater emphasis on simplicity and surprise. Infiltration may be easier. Travel may be on roads and tracks to maintain direction and cohesion. Deployment into the assault formation occurs as late as possible. Even if the battle group commander plans to conduct the attack without preparatory fire to achieve surprise, such support should be on call.

3. **Movement**. Special attention is given to the movement plan. Disorientation is a factor that risks delay, confusion, loss of surprise and troops blundering into the enemy or each other. Objectives should be easily identifiable and reduced in size. Intermediate objectives may be required. The plan minimizes the difficulties of navigation by selecting easily identifiable routes, axes, line of departure and objectives. Furthermore, every possible aid to navigation is provided during the deployment and the assault.

4. **Illumination**. The surveillance and target acquisition plan contains both passive and active phases. Not all part of the battle group adopt the active phase simultaneously; for example, the assault element may remain passive while support weapons are illuminating and engaging the objective. Passive surveillance devices and weapon sights are re-allocated if necessary, so that the assault, fire support and flank guard or screen all have an adequate passive target acquisition and engagement capability. Illumination targets include the objective, other identified enemy positions, potential blocking positions, and likely approaches for the enemy reserve. Additional tasks include deception, blinding enemy surveillance devices or helping in navigation.

5. **Fire Plan**. Illuminating tasks may be fired by mortars to release artillery for HE tasks. The most effective direct fire is provided by close range stabilized tank fire.

6. **Weather**. Visibility changes very quickly as fog lifts or as bright moonlight is obscured by clouds. The plan should provide for such changes and in particular for the situation where the attacking troops are suddenly exposed to view.

7. **Reconnaissance**. It is essential to allow sufficient time for reconnaissance. Ideally, all commanders down to tank/section level see the ground and, if possible, identify their objectives

before the attack begins. Where ground reconnaissance is impossible, air photographs, patrol reports, and even models, can help to familiarize commanders with the ground.

8. **Conduct**. The attack during periods of reduced visibility is similar to the daylight attack, especially on a bright night or when the attack benefits from image intensification and thermal imagery devices. The main differences between day and night attacks are that engagements take place at shorter ranges, and greater initiative is required by junior commanders. Tanks may have the additional task of providing illumination. Fire support elements note the location of the assault elements from progress reports and, when possible, by personal observation. The risk of confusion or clashes is greatest when a sub-unit passes through another. To minimize the risk, the leading sub-unit:

a. halts on a easily identified feature;

b. consolidates quickly;

c. sends guides to the RV to meet and lead forward the sub-unit to pass through; and

d. employs effective recognition signals.

9. **Consolidation**. Consolidation is likely to take longer than by day. Following consolidation, the movement of tanks and support weapons onto the objective proceeds quickly but carefully. Arcs of fire may have to be confirmed with tracer. The position is compact during a night attack and may have to be dispersed at first light.

323. INFILTRATION

1. Infiltration is the undetected movement of troops through the enemy's forward defences to:

a. seize undefended key terrain and prepare it for defence;

b. attack enemy depth battle position, gun areas, or counter-attack forces;

c. seize enemy depth battle positions and hold them; and

d. support other attacks.

2. Offensive operations offer many opportunities for battle group infiltration. Although infiltration is most frequently carried out by infantry, it is a suitable tactic for mechanized troops in the right circumstances. It is a form of manoeuvre that requires specially trained troops and rehearsals. It is most appropriate during conditions of reduced visibility or when the enemy's defences are widely dispersed. Surprise, accurate locations and strength of the enemy, and good navigation are essential to success. Thorough reconnaissance is necessary to locate enemy defences, observation posts, surveillance devices, minefields and obstacles, and to confirm

infiltration routes and attack positions. The insertion of troops by helicopter to secure objectives in depth is another form of infiltration.

3. The major considerations in the infiltration plan are:

   a. The force should be sufficiently strong but small enough to avoid detection.

   b. Infantry is not able to carry heavy support weapons. To compensate for this -

      (1) all objectives should be in range of our artillery; and

      (2) plans should be made to reinforce the assault element with tanks and anti-armour weapons during consolidation, or before if the element of surprise is lost.

   c. All routes are secured from enemy observation and fire. Small parties using many routes are preferable to larger groups moving on only one or two routes.

   d. Patrols screen the advance and cover the flanks of the infiltrating element. Behind this screen, guides deploy at critical points, RVs and attack positions. Simple control measures are vital to prevent confusion and clashes between infiltrating elements.

   e. Passive and active measures are taken to achieve surprise. In addition to any other deception plan, noise, light and artillery fire are on call to distract or confuse the enemy if an infiltrating group is detected.

   f. The force is self-sufficient in ammunition, supplies and medical support until link-up is achieved.

4. If the enemy is located or contact made en route to the attack position, the commander of the infiltrating group decides what action to take. His options are:

   a. attempt to bypass the enemy;

   b. withdraw the troops in contact and continue with a reduced force on the other routes; or

   c. fight through the enemy, but sacrifice surprise.

Once the infiltrating force reaches the attack position, the attack is conducted in the normal way.

324. ATTACKS IN BUILT-UP AREAS

1. The fundamentals of offensive actions apply equally to attacks in built-up areas. A battle group may attack a small village or town but would participate as part of a formation in an attack on a town or city.

2. **Characteristics**. Fighting in built-up areas (FIBUA) has the following characteristics:

a. The proximity of buildings creates a three dimensional battlefield to which includes fighting on the floors and roofs as well as in basements, sewers land subways. Troops must be capable in employing specific FIBUA drills.

b. Fields of fire and observation are limited and it is more difficult to achieve mutual support. Fighting will be at close quarters, in isolated local battles, on narrow frontages fought mainly by the infantry. Casualty rates may be higher and expenditure rates of small arms ammunition will be significantly higher. There will be a greater need for reserves, reinforcements and rotation of troops in contact.

c. Locating and maintaining contact with the enemy will be more difficult so it may be necessary to fight for information. All forms of information about the built-up area will assist in developing the intelligence picture.

d. The protection provided by various types of construction may limit the fragmentation effects of indirect fire weapons. Field artillery, with its greater weight of projectile and various shell/fuze combinations, is more effective than mortars. Mortars may be advantageously used when a higher trajectory is required. After the artillery has weighed the relative risk to equipment and detachments, field artillery may be employed to provide direct fire.

e. Vehicle movement is canalized on streets and further limited by obstacles, rubble or effective fire. Mines and booby traps are particularly effective in dense built-up areas. Dismounted movement may have to be through covered interior routes under, over or through buildings which will require extensive engineer support, use of special equipment and explosives.

f. Although there is some protection from observation and attack from the air, use of aviation is still possible in built-up areas. Both area and point air defence are required.

g. Built-up areas contain combustible material which may influence the battle when set on fire. Flame weapons may be used. There should be measures taken to limit the likelihood of fires or to extinguish them if required.

h. Chemical and biological weapons are effective in built-up areas to block approaches or create casualties; thus troops must conduct monitoring and be prepared to adopt adequate defensive measures.

j. Command and control is more difficult in built-up areas with different deployment patterns and the difficulty of determining the locations of forces. Buildings degrade the effectiveness of radio communications and the density of force concentration may lead to mutual interference. There will be greater reliance on alternate means of communication and recognition of signals.

3. **Stages**. The three stages used in a conventional attack are used when fighting in built-up areas. In the assault stage, the break-in establishes a lodgment for the subsequent fighting through to clear the built-up area. The approaches to the built-up area are controlled. The fighting through may be conducted to attempt a rapid penetration to the enemy's vital ground to destroy his defensive framework and then clear strong points, or it may be necessary to conduct a systematic, building to building, street to street clearance. Isolation of a town may be accomplished by dominating the adjacent terrain to block the enemy from reinforcing or resupplying. There is likely to be a greater reliance on hand-held weapons to suppress the enemy in the built-up area where it is difficult to engage with heavy direct fire systems or to employ indirect fire effectively. The restrictions on manoeuvre will likely necessitate dismounted movement, including infiltration, to achieve the concentration of force to destroy the enemy. A battle group attack may be merely a series of section, platoon, or company attacks.

4. **Roles of Tanks**. Tanks may be used in built-up areas, especially to provide heavy, direct fire support to the infantry. Tanks employed in this role should have a good stock of high explosive shells. The firepower of the tank may be limited in its ability to traverse the gun in confined areas, or to depress or elevate to engage targets in buildings. Infantry provide protection for tanks because the enemy will take advantage of the tank's blind spots to attack the tank with short range weapons. Tanks may be employed in limited numbers in support of company or platoon attacks within the built-up area, as well as in a standard grouping manoeuvring outside to isolate the built-up area.

5. **Role of Field Artillery**. Indirect fire supports the fighting on the perimeter and within the built-up area. Medium and heavy howitzer projectiles are effective against concrete buildings and other fortifications. Some units will have CB and counter-mortar missions. If necessary, some guns may be employed in the direct fire role in support of the elements fighting in the built-up area.

6. **Role of Air Defence**. Air defence weapons have limited arcs in built-up areas. They are best used on likely air approaches or helicopter stand-off positions, or for area defence of the entire built-up area.

7. **Role of Engineers**. For attacks in built-up areas, engineers provide engineer reconnaissance, assist in mobility by clearing obstacles and by opening routes for both infantry and tanks. Demolition teams augment the pioneers in a battle group. During the consolidation, engineers assist in emplacing obstacles and clearing fields of fire. There are numerous additional

tasks such as EOD and rescue support as well as advice and expertise in general engineering functions associated with public utilities and buildings.

8. **Role of Aviation**. Helicopters are used for insertion of troops, deploying observation posts, air observation posts, rebroadcast, medical evacuation, or resupply. Attack helicopters may be employed to support the fighting in the built-up area but they may be more effective attacking enemy reserves or enemy troops on the outskirts.

ASSAULT WATER CROSSINGS

TO BE PUBLISHED

OBSTACLE BREACHING

TO BE PUBLISHED

ANNEX C, CHAPTER 3

COORDINATION OF ATTACK

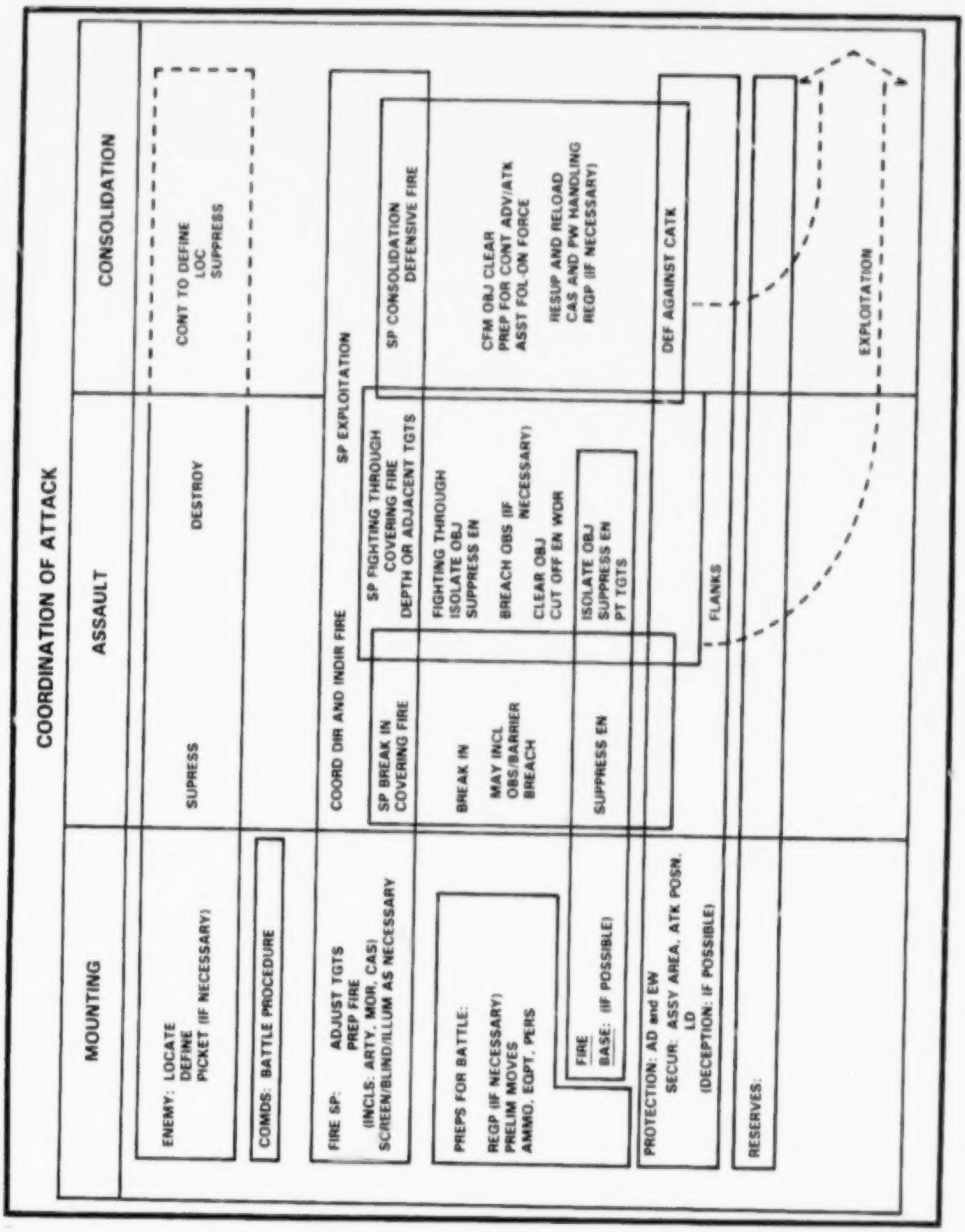

COORDINATION OF ATTACK
MOUNTING
ASSAULT
CONSOLIDATION
ENEMY: LOCATE
DEFINE
PICKET (IF NECESSARY)
SUPRESS
DESTROY
CONT TO DEFINE
LOC
SUPPRESS
COMDS: BATTLE PROCEDURE
FIRE SP: ADJUST TGTS
PREP FIRE
(INCLS: ARTY, MOR, CAS)
SCREEN/BLIND/ILLUM AS NECESSARY
COORD DIR AND INDIR FIRE
SP EXPLOITATION
SP BREAK IN
COVERING FIRE
SP FIGHTING THROUGH
COVERING FIRE
DEPTH OR ADJACENT TGTS
SP CONSOLIDATION
DEFENSIVE FIRE
PREPS FOR BATTLE:
REGP (IF NECESSARY)
PRELIM MOVES
AMMO, EQPT, PERS
BREAK IN
MAY INCL
OBS/BARRIER
BREACH
FIGHTING THROUGH
ISOLATE OBJ
SUPPRESS EN
BREACH OBS (IF NECESSARY)
CLEAR OBJ
CUT OFF EN WDR
CFM OBJ CLEAR
PREP FOR CONT ADV/ATK
ASST FOL-ON FORCE
RESUP AND RELOAD
CAS AND PW HANDLING
REGP (IF NECESSARY)
FIRE
BASE: (IF POSSIBLE)
SUPPRESS EN
ISOLATE OBJ
SUPPRESS EN
PT TGTS
PROTECTION: AD and EW
SECUR: ASSY AREA, ATK POSN, LD
(DECEPTION: IF POSSIBLE)
FLANKS
DEF AGAINST CATK
RESERVES:
EXPLOITATION

Figure 3C-1 Coordination of attack

FIRE SUPPORT PLANNING GUIDE

ANNEX D, CHAPTER 3

FIRE SUPPORT PLANNING GUIDE

THE CLASSIFICATIONS OF FIRE

1. The most common classifications of fire employed during attacks are:

   a. **Preparatory Fire** to weaken the enemy, to inflict casualties on personnel and equipment, to destroy defence works and to disrupt communications.

   b. **Covering Fire** to neutralize enemy direct fire weapons and positions and to protect our assault element when it is within range of enemy direct fire weapons.

   c. **Defensive Fire** to assist and protect a unit engaged in a defensive action. It may be employed in depth to disorganize enemy counter-attack preparations, or close in to engage and destroy enemy when an attack is launched.

   d. **Counter Battery** Although this is a responsibility of higher formation, the artillery commander at battle group level must ensure that the CB plans are effective in neutralizing enemy artillery in direct support of the enemy in the objective.

HASTY ATTACK

2. The hasty attack is characterised by speed. The fire plan is developed from the CFSP and may utilize fewer guns and less ammunition than for a deliberate attack. It must be simple to initiate and to modify. The following general characteristics apply:

   a. To achieve speed, ammunition types are of the simplest natures. HE will normally be fuzed PD. WP is utilized instead of SMK. Complex drills such as linear targets or deliberate smoke screens are not usually employed. The larger safety distance for DPICM is a consideration.

   b. As ammunition quantity may be limited, indirect fire must be inserted only when most critical.

   c. Indirect fire does not stop as the assault element approaches the objective. It shifts from the front of the objective to the depth or rear or to mutually supporting enemy flanking positions in an attempt to isolate that part of the objective as selected by the commander of the attack.

   d. Mortar fire is coordinated by the FOO. Mortars may best be used for providing WP or illumination.

DELIBERATE ATTACK

3. The deliberate attack requires more detailed planning and preparation. It is normally supported by more guns and quantities of ammunition. It is more complex to organize, therefore it is more complex to modify. The following general characteristics apply:

a. Various shell/fuze combinations are possible, technical drills such as linears and deliberate smoke screens could be incorporated.

b. A portion of the artillery effort can be expended on preparatory fire instead of concentrating solely on covering fire as in the hasty attack. Airburst fuzes, DPICM, SMK may be used for preparatory fire. HEPD and WP remain the primary weapons selected for covering fire.

c. Ammunition supplies will normally be more readily available as will fire units. Timings must be as closely coordinated as for the hasty attack. Although there may be more resources, it is probable there will be more targets.

d. Offensive air support and attack helicopters are coordinated by the artillery commander.

SAMPLE FIRE PLAN FOR THE ATTACK

PHASE OF ATTACK	FIRE PLANNING GUIDE
MOUNTING	1. Arty adjusts tgts. Provide prep fire to assist dir fire wpns (tks) in winning the initial fire fight. 2. Mors adjust those tgts they are reqr to engage during fire plan.
ASSAULT - ASLT ELMS IN ATK POSN	1. Arty neutralizes fwd positions of obj (probably at slow rate). 2. Fire base engaging pri pt tgts: A armour wpns, tks, APCs. 3. Tks and APCs in aslt elm may or may not be able to engage from the atk posn dependent on grd and rge (ideally atk posn in dead grd to obj).
CROSSING LD BREAK IN ADV TO OBJ	1. Arty neutralizes fwd portion of obj (probably at normal rate). 2. Mors may be tasked to provide WP or illum. If WP/ILLUM not reqr, mors may assist in neutralization of fwd portion of obj (at high rate). 3. Fire base continues to engage pri hard tgts and fwd portion obj (indiv trenches) with HESH/HEAT. 4. Tks in aslt elm fire on mov at hard tgts and fwd portion of obj.
DISMOUNT	1. Arty and mors shift to depth of obj or flank posns (at normal rate). 2. Fire base concentrates on fwd position of obj with HESH/HEAT. 3. Tks concentrate on fwd positions of obj with main armament and coax MG. 4. Inf APC if equipped with stabilized MG engage fwd edge of obj at rapid rate.
FIGHTING THROUGH	1. Arty shifts to depth or flank (at slow rate). 2. Fire base changes to tgts of opportunity only, depending on ammo sit. 3. Tks, engage tgts of opportunity in depth of obj. 4. Tks engage tgts in sp of and as dir by inf. 5. APC continue to fire if good comms and visibility and on order of Coy/Pl comds.
CONSOLIDATION	1. Arty and mor on DF or tgts of opportunity. 2. Move of mors may be necessary to cover next bound. 3. Tks engage tgts of opportunity and tgts in sp of inf. 4. Fire base executes secondary tasks or moves to consolidate with the assaulting echelons.

ANNEX E, CHAPTER 3

CONTROL MEASURES FOR ATTACK

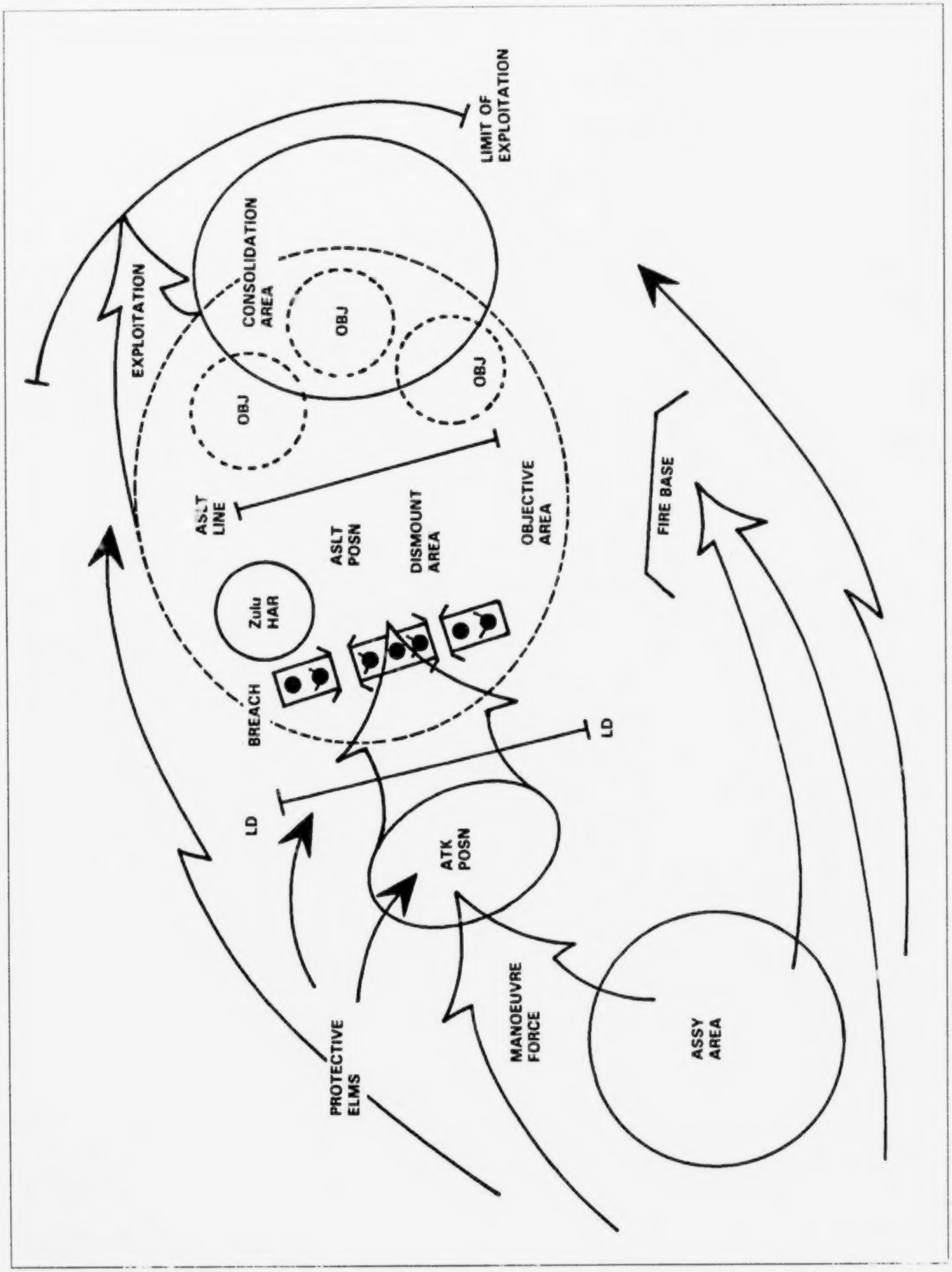

LIMIT OF EXPLOITATION
EXPLOITATION
CONSOLIDATION AREA
OBJ
OBJ
OBJ
ASLT LINE
ASLT POSN
DISMOUNT AREA
OBJECTIVE AREA
FIRE BASE
Zulu HAR
BREACH
LD
LD
ATK POSN
PROTECTIVE ELMS
MANOEUVRE FORCE
ASSY AREA

Figure 4E-1 Control measures for attack

CHAPTER 4

DEFENSIVE OPERATIONS

CHAPTER 4

DEFENSIVE OPERATIONS

SECTION 1

INTRODUCTION

401. GENERAL

1. Defensive operations are conducted to hold ground, gain time, or defeat an enemy attack. They are undertaken when the enemy has the initiative, and they are usually temporary. Once the enemy's strength has been depleted offensive operations are begun. Defensive operations are conducted for any of the following reasons:

   a. to weaken the enemy's offensive capability and cause his attack to fail;

   b. to hold vital ground and to prevent the enemy from breaking through;

   c. to gain time to prepare for or resume offensive operations;

   d. to contain the enemy in one area, while attacking elsewhere; or

   e. to force the enemy to concentrate to make a more lucrative target.

2. Battle groups participate in a variety of operations within the formation commander's defensive plan. These operations include:

   a. **Defence**. This is undertaken to prevent the enemy from seizing terrain or breaking through into a defended area. Its purpose is to break the enemy attack. The defensive battle is fought in three stages: Covering Force, Main Defence and Countermoves.

   b. **Delay**. This occurs when a force, under pressure, trades space for time by slowing the enemy's forward movement and inflicting maximum casualties, without, in principle, becoming decisively engaged.

   c. **Withdrawal**. An operation in which a force, in contact, disengages from the enemy.

These operations are discussed in subsequent sections. The principles of war, the fundamentals of battle group defensive operations and the type of threat are discussed in this section.

402. PRINCIPLES OF WAR AND TACTICS

1. Whether the defence is prepared hastily or deliberately, the principles of war remain the same.

2. **Principles of War**. The following principles of war are of particular concern during the planning and conduct of the defence and are described in detail in the manual, Land Formations in Battle:

   a. concentration of force;

   b. offensive action; and

   c. security.

3. **Tactics**. In addition to the principles of war, the employment of the battle group is based on:

   a. **Information Gathering**. In the initial stages the battle group commander relies on from formation headquarters. Then information on the enemy becomes available from battle groups within their areas of responsibility. Sources of information and intelligence are -

      (1) covering troops,

      (2) formation intelligence resources including target acquisition systems,

      (3) patrols, and

      (4) troops in contact.

   The battle group commander considers information from all sources about enemy capabilities and intentions.

   b. **Use of Terrain**. The strength of a defence depends to a large extent of the selection and use of terrain. The formation commander selects approaches, key terrain and deploys forces to support his defensive plan. He assigns battle group areas of responsibility and tasks consistent with his concept of operations and that of his superior commander. This process, repeated at each level of command, helps to knit the separate plans into a cohesive whole. Terrain is classified as -

      (1) **Open**. This is relatively flat and unencumbered by forests, buildings, waterways and other natural barriers. It is covered easily by surveillance and can be dominated by fire. Such terrain requires the construction of extensive barriers or the use of scatterable mines to restrict the movement

of enemy forces. These areas are suitable for tanks and troops equipped with long range anti-armour missiles.

(2) **Close**. This may have considerable relief and may be broken by forests, buildings and other natural barriers. It restricts an attacker's movement and provides good concealment and protection for the defender. Natural obstacles can be improved to further delay the attacker and canalize his movement. These areas are defended best by infantry.

A commander designates his vital ground. He then identifies the main approaches to his vital ground and the key terrain that dominates or blocks those approaches. He selects his vital ground, key terrain and killing zones by -

(1) identifying obstacles at the forward edge of the battle area (FEBA),

(2) determining approaches to the FEBA,

(3) anticipating enemy objectives,

(4) identifying obstacles in the main defence area (MDA),

(5) completing approach descriptions, and

(6) ranking the approaches in terms of their likelihood of use.

c. **Co-ordination**. The battle group commander and his staff conduct continuous co-ordination during the planning and execution of defensive operations. It is particularly important to conduct co-ordination not only within the battle group, but also with adjacent units, formation headquarters, unit headquarters of attached/detached elements and elements in location.

d. **Mutual Support**. It exists when positions are able to support each other by fire so that the enemy cannot attack one position without being subjected to fire from another position. The degree of mutual support achieved depends upon the ground, visibility and range of weapons. There is a relationship between the frontage that can be held, mutual support, mobility and the depth of the defence. There is often a conflict between the need for depth and the requirements for mutual support. In balancing these requirements the battle group commander may have to sacrifice some mutual support to achieve depth. If gaps are unavoidable they should be between squadrons and companies; troops or platoons must be mutually supporting. Gaps are covered by surveillance equipment and perhaps patrols.

e. **Depth**. Defence in depth forces the enemy's attack to be phased with at least one of the attacks to be conducted without reconnaissance. It may surprise the enemy and draw him into committing his reserve. It tends to absorb the attacker's momentum and reduces the chance of a breakthrough. Finally, it gives the defender time to determine the attacker's main thrust and to counter it. The depth of the defensive area should be proportional to the strength, mobility and firepower of the attacker and the frontage to be defended. Depth is obtained by -

(1) employing protective elements well forward to guard approaches;

(2) employing long range weapons, including electronic warfare equipment and tactical air support, to engage targets in the area of influence;

(3) siting battle positions and obstacles in depth throughout the area; and

(4) positioning and moving reserves, fire support elements and combat service support units.

f. **Manoeuvre**. Using hit and run tactics commanders avoid unpromising decisive actions. This enables them to concentrate sufficient strength at the right time and place to defeat the enemy.

g. **Firepower**. The effectiveness of the defence at all levels depends on the planning, co-ordination and use of all weapons. The battle group commander employs his own weapons and is prepared to use those available from his higher formation and adjacent units.

h. **Reserves**. A reserve gives the commander a means to influence the outcome of a battle or to counter an unexpected move by the enemy. Reserves are used to reinforce, block and counter-attack. At battle group level the reserve may be small, but without it the commander's ability to influence the battle is limited. Surprise is essential for the successful commitment of the reserve. This is achieved by rapid and decisive action, deception, or attacking from an unexpected direction. Once the reserve has been committed a new one must be created. It may be necessary to constitute a reserve from units in those areas least threatened or from troops in depth that are not in contact with the enemy.

403. THREAT

1. **Principles**. In Fantasian doctrine the offence is supreme. It emphasizes the following principles:

a. surprise at all levels using all available methods;

b. concentration of force at the selected time and place;

c. speed and mobility; and

d. momentum and initiative.

2. **Types of Attack**. Fantasian doctrine recognizes the following type of attacK;

a. **Meeting Engagement**. This encounter occurs when two opposing forces meet each other while both are moving. The Fantasian Army believes that the commander who reacts the fastest prevails over his slower opponent. Their battle procedure for the meeting engagement consists of simple well-practised drills and SOPs. When contact is made the Fantasian commander is expected to immediately deploy his forces for attack without a halt or pause. They believe that, at the battle group level and below, the meeting engagement is the most common action.

b. **Hasty Attack**. (attack from the line of march). The hasty attack is similar to a meeting engagement but it is launched against a static defence. The Fantasian commander is expected to deploy for attack directly from the line of march with a minimum of delay.

c. **Deliberate Attack**. (attack from a position in close contact). The deliberate attack occurs typically following the failure of a hasty attack. It can also occur in those instances where intelligence indicates that resources immediately available are insufficient. This form of attack is characterized by detailed planning and extensive artillery support.

3. **Regiment in the Attack**. The regiment is the smallest combined arms unit. It normally attacks as part of its parent division. Its mission is to penetrate the defence and destroy the defending troops as far as the enemy battalion rear boundary (see Figure 4-1); then it must be prepared to continue the attack into the brigade or even the divisional rear area. The frontage of a regiment in the advance could be 6-10 kilometres wide. Its actual attack frontage is considerably less, normally four kilometres. A regiment normally attacks in two echelons with two motor rifle battalions in the first echelon and one in the second. The organic tank battalion typically groups a company with each of the three motor rifle battalions. If the enemy defence is believed to be shallow an attack in one echelon is undertaken. A regiment attacking on a main axis is heavily reinforced with formation resources, such as three to four artillery battalions as well as additional engineer and air defence resources. In a deliberate attack on the main divisional axis a regimental commander can expect the fire of his organic and assigned artillery to be augmented by the fire of his parent division's artillery group and an army artillery group. For an attack with a frontage of four kilometres, up to 240 tubes can be available for the preparatory bombardment. The mechanized attack is the preferred method of attack. Against a defence in depth, thickened with anti-tank guided missiles, the Fantasian Army recognizes that an infantry attack is necessary. The attack is made at best speed supported by artillery fire with both HE and SMOKE. Small isolated enemy pockets are bypassed and the commander tries to exploit gaps in the defence and fine the path of least resistance to reach his objective. Less obvious axes are selected over high speed avenues of approach in the expectation that the former is less heavily defended.

SECTION 2

DEFENCE

404. GENERAL

1. The stages of the defence occur in sequence, however the transition from one stage to another is seldom distinct and it often occurs at different times and in different locations in a formation's area of responsibility. The stages are:

   a. covering force stage;

   b. main defence stage; and

   c. countermoves stage.

This section examines the employment of battle groups in each stage of the defence.

405. THE NATURE OF DEFENSIVE OPERATIONS

1. The current concept of the defence in non nuclear (conventional) operations has the following attributes:

   a. a series of obstacles to delay or canalize the enemy;

   b. the use of guards and screens;

   c. infantry dug-in and concealed to deny ground;

   d. anti-armour weapons sited to destroy enemy tanks at long range;

   e. troops in depth to contain penetrations;

   f. a reserve to reinforce, block or counter-attack;

   g. a comprehensive fire plan;

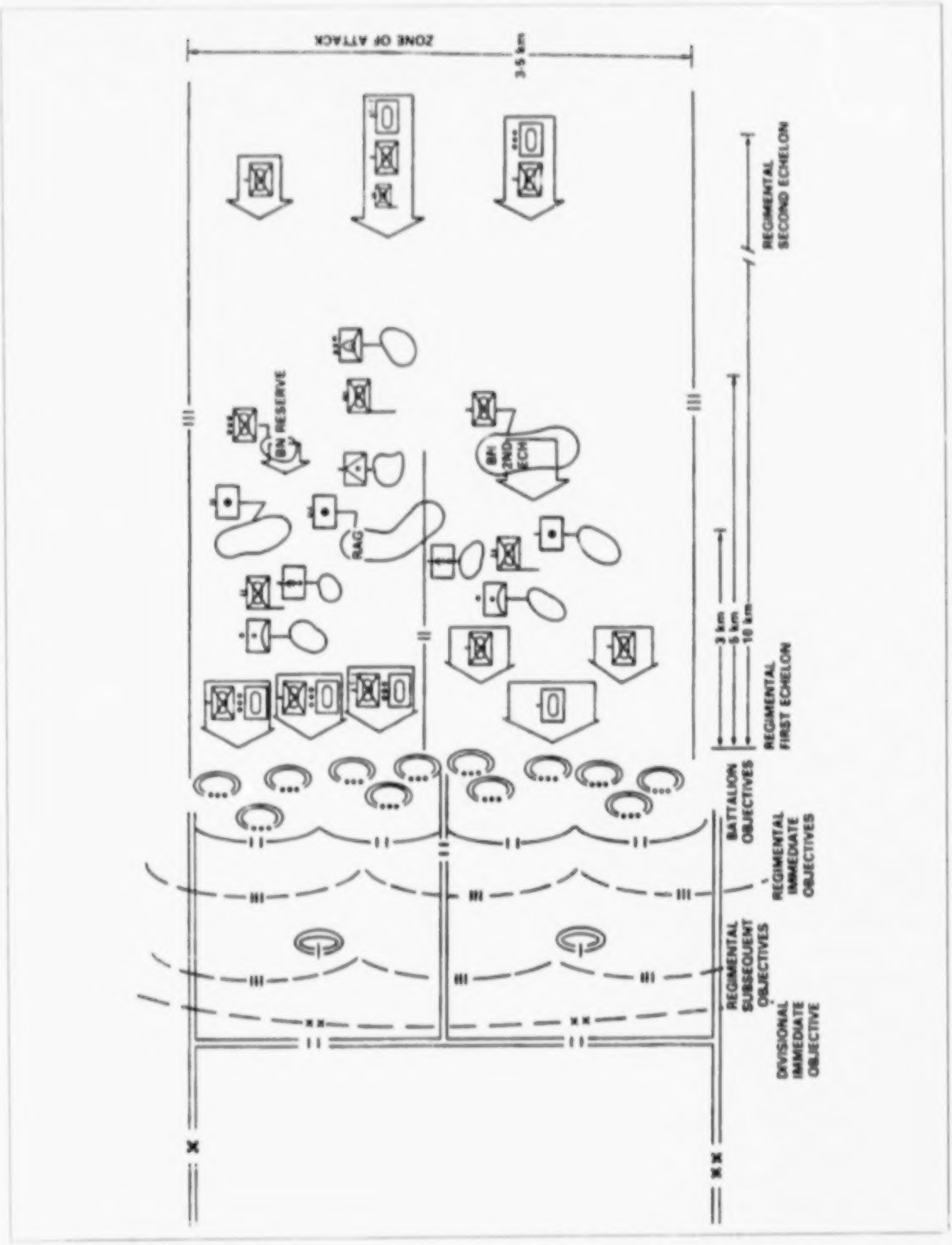
   h. interdiction of second echelon and reserve forces, within the area of influence using air, land and naval resources; and

   j. security of rear areas and flanks.

2. The concept includes both positional and mobile aspects. It means engaging the enemy, especially reconnaissance forces, as far forward as possible to reduce the momentum of his attack. The balance between holding ground and manoeuvre depends upon the mission, the

enemy, ground, time and space and the forces available. Normally the concept calls for positional elements to be infantry heavy battle groups while mobile elements are tank heavy battle groups.

3. The defence includes an obstacle or series of obstacles covered by fire that force the enemy to stop and conduct a deliberate crossing or breaching operation, or cause him to be canalized into killing zones. Strong points are concentrated on the enemy's main axis, while simultaneously all available firepower engages follow-on forces which could reinforce or otherwise influence the outcome of the battle. Battle groups in the main defensive area are strong in ground-holding infantry with tanks held in depth as a reserve to deal with the unexpected and to exploit success.



ZONE OF ATTACK
3-5 km
BN RESERVE
BN 2ND ECH
RAG
3 km
5 km
10 km
REGIMENTAL SECOND ECHELON
REGIMENTAL FIRST ECHELON
BATTALION OBJECTIVES
REGIMENTAL IMMEDIATE OBJECTIVES
REGIMENTAL SUBSEQUENT OBJECTIVES
DIVISIONAL IMMEDIATE OBJECTIVE

Figure 4-1 Fantasian Regimental Attack

4. The main defensive force seeks to destroy the enemy on or in front of the FEBA. If the enemy achieves penetration a battle of containment develops. Once the enemy is contained, counter-attacks are launched to complete his destruction.

406. COVERING FORCE STAGE

1. The covering force operates forward of the main defensive area to protect the deployment of the main force, to delay the enemy and to identify the main axis of his advance. The covering force consists of:

  a. a security screen to observe, identify and report information, but fights only in self-defence; and

  b. a guard to protect the main force by fighting, if required, to gain time and also observe and report information.

The screen is a reconnaissance unit while a guard is a battle group. In the covering force, the battle group fights a delaying action as the guard. The delay is described in Section Three.

407. MAIN DEFENSIVE STAGE PLANNING

1. The main defensive stage begins when the covering force breaks off contact with the enemy and passes responsibility to the main defensive force at a handover line. Main force troops assist the covering force to disengage and pass through the main defensive area.

2. The main defensive stage is fought according to the commander's concept of operations and the several supporting plans and policies:

  a. field protection policy;

  b. barrier plan;

  c. defensive fire plan;

  d. surveillance and target acquisition plan;

  e. countermoves plan;

  f. air defence plan;

  g. anti-armour plan;

  h. electronic warfare plan;

j. rear area security plan; and

k. administrative plan.

The above plans are considered in some detail in Annex A to this Chapter.

3. The overall concept of operations is determined at the highest level of command. Each subordinate commander bases his plan on his superior's concept and plans. This planning process, repeated at each level of command, ensures a consistent application of the concept and plans that gives a cohesive defence. The battle group commander thinks one level up and plans two levels down.

4. Defensive battle procedure considers the following:

a. Time for reconnaissance, planning, and preparation is always limited. The early issue of a warning order and a preliminary order permits concurrent activity at all levels.

b. A general plan for defence is made after a detailed map study. This is followed by a reconnaissance of the ground.

c. When time is limited, battle procedure may be shortened by meeting sub-unit commanders forward. This saves travel time since the sub-unit commanders are in position to do their reconnaissance and planning prior to returning to the rendezvous for orders.

d. The concept of operations and supporting plans are explained so that they are understood by all commanders.

e. Supporting plans are coordinated with adjacent units and formation headquarters.

5. The strength of the defence depends to a great extent on the selection and use of ground. The ability of the battle group commander to analyse the ground, determine the approaches, select key terrain and deploy his forces, may determine success or failure.

6. A commander looks at his area of responsibility first from the enemy's point of view. This reveals the mechanized high speed approaches into and through his area. Then, from the defender's point of view he considers the ground features that dominate or tend to obstruct mechanized movement. He continues this ground study throughout the depth and width of his area. He also notes areas of concealment and routes that offer good going. Finally he looks for possible infiltration routes through forested or built-up areas and airborne or airmobile landing zones. From a study of the ground the commander determines:

a. main and secondary approaches into and through his area of responsibility;

b. most likely infiltration routes;

c. key terrain dominating likely enemy approaches;

d. natural obstacles that impede or canalize movement and how they can be improved, and requirements for their improvement;

e. where artificial obstacles can improve natural obstacles and where they should be used on their own;

f. ground providing the best observation and long-range engagements;

g. ground providing the best concealment and battle positions, including primary and secondary positions; and

h. suitable routes for reinforcement, blocking, counter-attack and withdrawal.

7. A battle group may occupy the sector's vital ground. Within this area, the battle group commander identifies his own key terrain and vital ground and sub-units defend. The designation of vital ground is relative to the level of command. What a battle group commander designates as vital ground may be key terrain to the formation commander. By clearly stating what ground is vital to the defence, the commander directs subordinates to focus on the ground that blocks or dominates the approaches to it.

8. The selection of killing zones reflects the formation commander's concept of operations. He identifies areas where the enemy is forced to concentrate, thereby making a lucrative target. Specific killing zones are selected by battle group commanders who employ obstacles, indirect fire, battle positions and a reserve to contain and destroy the enemy. Where an approach falls into two battle group areas the formation commander coordinates that particular killing zone.

9. Sub-unit battle positions provide all round defence, mutual support and depth. They are concealed as much as possible from ground and air observation. Positions on reverse slopes, in forests and built-up areas offer the best concealment and should be used if fields of fire adequately cover the approaches.

10. Reverse slope positions provide cover, concealment, and an opportunity to surprise the enemy. A position is illustrated in Figure 4-2. Reverse slope positions are laid out as follows:

a. The forward edge of the position is within effective weapon range of the crest but far enough from the crest for the enemy to be exposed to this fire for as long as possible. Against a mechanized threat, some tanks, tank destroyers, long and medium range anti-armour weapons are initially sited forward, in the sniping role, to begin the early destruction of the enemy.

b. Protective minefields and wire are below the crest line and defensive fire is planned here.

c. Observation and surveillance elements are sited forward and to the flanks to provide early warning and to control indirect fire.

d. The surveillance and target acquisition plan provides maximum illumination of the enemy as he crosses the crest and encounters obstacles.

e. Mutually supporting fire engages the enemy on the forward slope.

11. While a reverse slope position usually provides the best position for defence, the choice of a forward or reverse slope position depends on many factors. Battle group or combat team commanders use a reverse slope position when:

a. there is an opportunity to surprise and deceive the enemy;

b. a forward slope is exposed to enemy direct fire;

c. occupation of the forward slope is not essential to achieve depth and mutual support; and

d. when fields of fire on the reverse slope are sufficient.

12. The battle group commander's general plan for defence establishes a framework for the defence based on:

a. **Positional Elements**. These are battle positions held by infantry companies supported by additional anti-armour weapons. They are located forward and in depth, covering obstacles, enemy approaches and killing zones. There is seldom sufficient infantry companies to occupy all selected battle positions. Battle positions are classified in order of priority. If they are not occupied initially they are developed as alternate blocking positions. Primary positions are prepared by sub-units while secondary positions are inevitably prepared by engineers. Sub-unit hides are occupied to maintain security of battle positions until the battle is joined. All unoccupied battle positions are picketted.

b. **Mobile Elements**. These consist mainly of tanks, TDs, APC with cannon, anti-armour weapons and infantry. They are used initially, for long range attrition of enemy armour and subsequently for countermoves as the battle develops. The battle group reserve occupies a hide in depth from where countermoves may be launched.

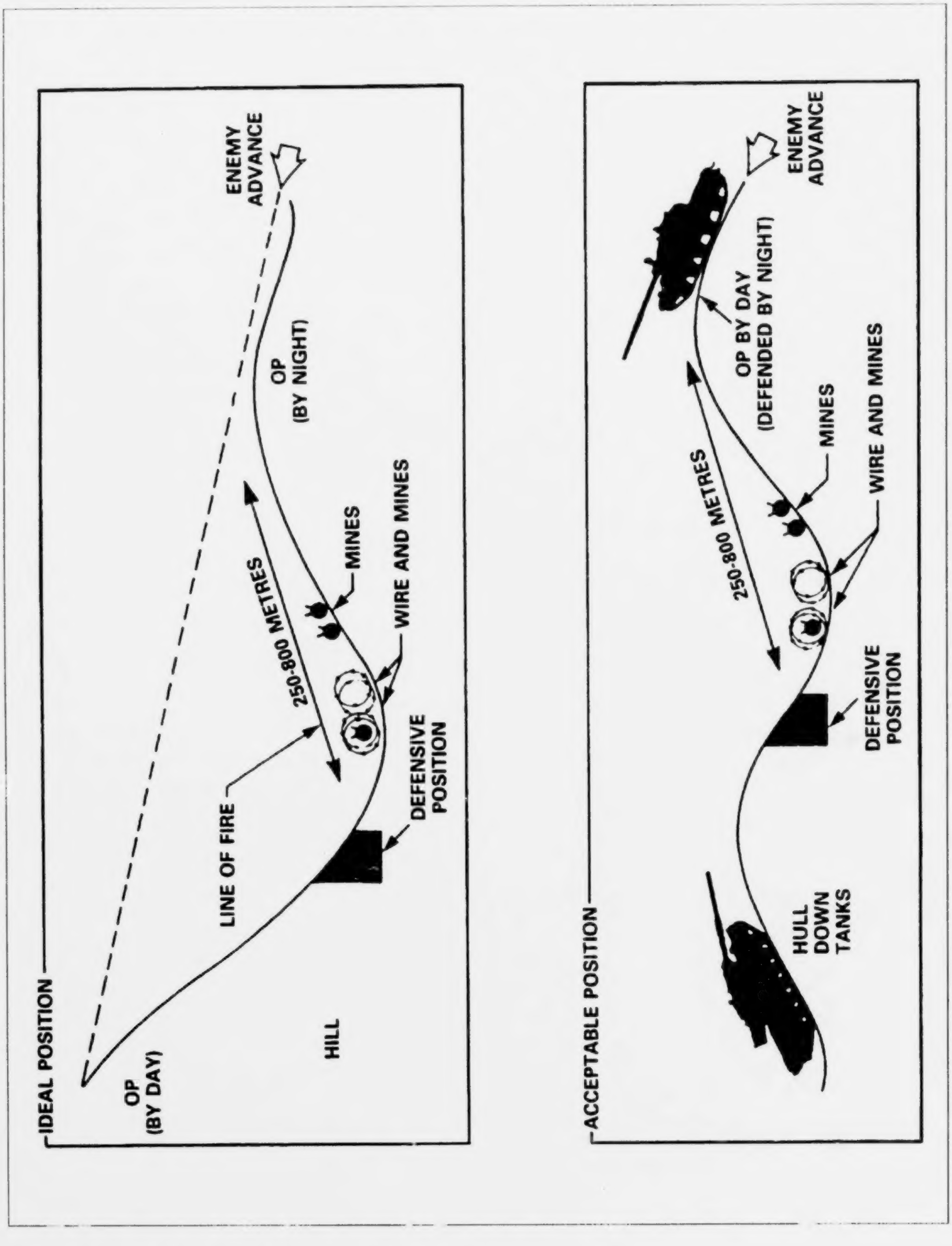

IDEAL POSITION
OP (BY DAY)
HILL
LINE OF FIRE
DEFENSIVE POSITION
250-800 METRES
WIRE AND MINES
MINES
OP (BY NIGHT)
ENEMY ADVANCE
ACCEPTABLE POSITION
HULL DOWN TANKS
DEFENSIVE POSITION
250-800 METRES
WIRE AND MINES
MINES
OP BY DAY (DEFENDED BY NIGHT)
ENEMY ADVANCE

Figure 4-2 Side View of Reverse Slope Position

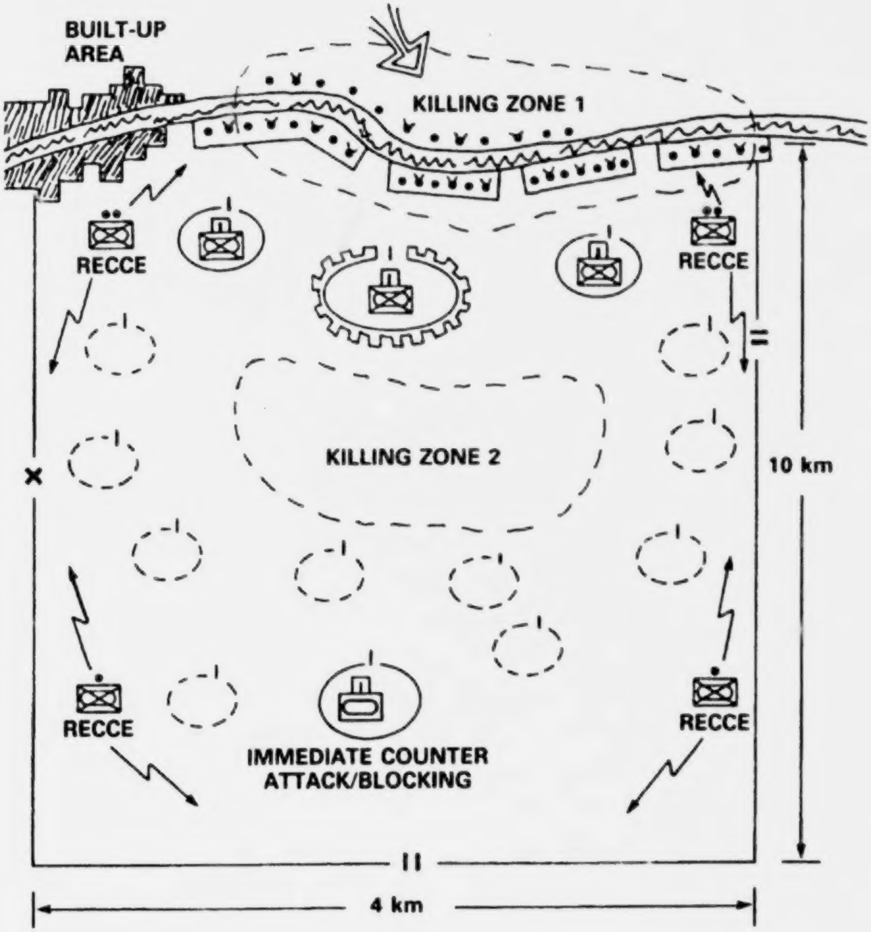

BUILT-UP AREA
KILLING ZONE 1
RECCE
RECCE
KILLING ZONE 2
10 km
RECCE
RECCE
IMMEDIATE COUNTER ATTACK/BLOCKING
4 km

Figure 4-3 General Plan for the Defence

13. The brigade or division field protection policy specifies the degree of field protection and priorities for development. The battle group commander is responsible for the siting and construction of field fortifications in his area of responsibility ensuring:

a. maximum use of urban areas for defensive positions;

b. maximum use of built-up areas for headquarters, administrative echelons, waiting areas and hides;

c. identification of essential elements that must be protected;

d. soft-skinned vehicles in forward areas are strickly controlled;

e. priorities for engineer work are stated; and

f. the types of field fortifications and stages of construction are stated.

14. The construction of field fortifications is an all-arms responsibility, although engineers provide the bulk of the specialist digging equipment. Initially the requirement for obstacles and the requirement for trench digging may conflict. The formation commander decides the engineer digging priority. Normally it is:

a. artillery gun positions;

b. command posts; and

c. forward battle positions.

Battle groups are responsible for digging defensive positions. On occasion engineers may assist the infantry. When battle groups are fully committed to operations or developing primary positions, the digging of alternate, secondary, and dummy positions may be undertaken by higher formation engineers.

15. **Priorities of Work**. Priorities of work depend on the tactical situation, ground and resources and time available. They are generally:

a. clear fields of fire;

b. lay line;

c. develop field fortifications; and

d. lay protective minefields, construct wire obstacles and emplace early warning devices.

Concurrent activity and security are important during all stages of development. Primary positions are dug in with overhead protection. Insufficient time and resources may preclude the digging of alternate and secondary positions.

408. MAIN DEFENSIVE STAGE CONDUCT

1. The defensive battle involves the following actions:

   a. destroying enemy tanks;

   b. stopping enemy penetrations;

   c. containing enemy penetrations;

   d. defeating enemy penetrations; and

   e. restoring the integrity of the defence by re-establishing the original FEBA.

2. The aim is to stop and defeat the enemy on the main obstacle. If penetration occurs, depth forces move to stop and contain the enemy. If a penetration is contained, but an inadequate reserve remains to defeat the enemy, assistance from a higher formation is requested to counter-attack and defeat the enemy.

3. The success of the defensive battle depends on the commander's ability to impose his will on the enemy and not to merely react to the enemy. Before the battle begins security, involving surveillance, noise and light discipline, control of electronic emissions and movement, and concealment, is stressed. Battle positions are occupied as late as possible to avoid early detection. Once the battle begins commanders have two means of influencing its outcome:

   a. by the control and direction of fire; and

   b. by countermoves.

4. They control fire directly or indirectly through their subordinates to conform to the defensive plan. Economy of fire in low priority areas is necessary if concentration of fire is to be achieved at critical times and places. A major question to be resolved is the relative importance of long range attrition to surprise. Selective long range engagements may reduce the enemy's fighting strength. Alternatively, withholding fire, as in an ambush, may achieve surprise and shock effect. Fire control is applied:

   a. to minimize the detection of weapons and units;

   b. to ensure that scarce ammunition, particularly anti-armour missiles, is not wasted; and

   c. to reinforce the canalizing effect of the obstacles and battle positions.

5. Long range attrition of the enemy starts with artillery and LRAAW fire. This is augmented by tanks, tank destroyers or even MRAAWs firing from sniping positions. In most circumstances, the battle group commander establishes opening fire control for two different groups:

a. for artillery/sniping elements an opening fire order depends on the type and number of vehicles, geographical aspects or proximity to friendly troops; and

b. for troops in battle positions the opening fire order is given by the commander at each level in accordance with unit SOPs or the operation order.

6. As the enemy advances, canalized and disrupted by obstacles and long range fire, control of tank and MRAAW fire continues until the enemy is within effective range of the largest possible concentration of MRAAWs. All weapons then open fire together to achieve the maximum surprise and shock effect.

7. Once the open fire order is given, subsequent control of anti-armour fire by the battle group commander is unlikely until the attack is stopped. Fire control continues by the sub-unit and troop/platoon. However, even this is likely to be difficult in the confusion of the attack. At this stage control is in the hands of junior leaders. Artillery and mortar fire are controlled and priorities given by the FSCC.

8. The battle group reinforces, blocks or counter-attacks to contain and defeat the enemy. Reinforcing and blocking are conducted with all or part of uncommitted, depth or reserve elements. Sub-units in contact continue to defend. When reinforcement is required, sufficient fire power, usually anti-armour weapons, are added without unduly depleting the reserve. Blocking is achieved by deploying a sub-unit not in contact, but movement to an alternate position must not jeopardize the integrity of the defence. Blocking by depth or reserve sub-units is best.

9. The reserve is committed as a whole not piecemeal, if necessary undertaking different tasks in succession. Speed is vital. In blocking or counter-attack, minutes or even seconds, may decide the outcome. Once the reserve is committed, the battle group commander reconstitutes another. Until this is done, his ability to influence the battle is limited.

10. The battle group ratio of reserve to uncommitted enemy determines whether the enemy is defeated or contained. The enemy may reinforce his penetration, particularly on a major axes. If he is able to mass sufficient strength to make our containment untenable, the battle group commander may have to call on the formation commander for assistance. Foresight and early warning are all important in the timely deployment of such forces. The battle group reads the battle and requests the support. Such reinforcing missions are preplanned at least up to the line of departure.

11. Battle group commanders exercise command and control of the defensive battle from positions of good observation, so that they can deal with developments and anticipate future actions. Control measures such as reference points and arcs of fire are used to simplify command

and control. Line and the civilian telephone are used as much as possible to avoid the effect of enemy electronic warfare. Communications are often disrupted. Sub-unit commanders use their initiative to combine fire discipline and offensive action to defeat the enemy at every opportunity.

409. COUNTERMOVES STAGE

1. The countermoves stage begins when the formation depth or reserve force is committed to reinforce friendly forces, block enemy penetrations, counter-attack, or exploit success to defeat the enemy and maintain or restore the integrity of the defensive area.

2. The formation commander normally preserves the integrity of the reserve so that it can execute its primary task of counter-attacking. Depth battle groups are used to block and reinforce as much as possible before the reserve is committed. Reinforcing, as described earlier in this section, is equally applicable at formation level.

3. The battle group in the formation reserve may be tasked with countermoves, including reinforcing, blocking and counter-attacking. The tank heavy battle group is usually kept for counter-attack. The battle group varies in size according to tasks, but usually includes, in addition to armour and infantry, artillery, air defence, and armoured engineers.

4. This article focuses on blocking and the counter-attack. The planning and conduct are equally applicable to combat teams conducting similar tasks within the context of a battle group defense.

5. Formation headquarters assigns air defence detachments to protect its reserve, both in the concentration area and when it is moving. Nevertheless the battle group's main protection is still achieved by concealment and dispersion. The principal means of concealment is:

a. careful siting and camouflage to escape direct observation and to screen or disguise electronic and heat emissions;

b. the full range of counter-surveillance measures, ranging from the imposition of radio silence to restrictions on starting engines; and

c. restrictions on movement, particularly by day.

Dispersion greatly increases the difficulty of control and administration. The degree of dispersion necessary depends on the cover available and the threat. Hides are sited to be defensible and to provide concealment and dispersion.

6. The movement of a reserve battle group may be planned and controlled by formation headquarters or by the battle group itself. In either case the aim is to move the battle group to its assembly area or attack position undetected, and in time to carry out its mission. The major planning considerations are:

a. **Security**. The enemy air and ground threat may affect the timing of the move, the selection and number of routes, and the grouping and order of march. In the most extreme case it may prevent a daylight move, or force the battle group to disperse into smaller groups moving on several routes.

b. **Tasks**. There may be several tasks for the battle group and tasks determine groupings and orders of march for moves.

c. **Timings**. The urgency of tasks determine when and how quickly moves are to take place. The commander balances speed against security in planning and executing moves. He uses foresight and plans for eventualities that may impede movement. It may often be advantageous to conduct preliminary moves to reduce response time. Formation and battle group headquarters staffs think ahead adjusting degrees of notice as a situation develops, without keeping troops at an unnecessarily high level of alert. However, in an emergency, the commander does not hesitate to order immediate movement, overriding formal degrees of notice.

d. **Routes**. Separate sub-unit routes taking advantage of all available cover are preferred. The selection of alternate routes and the employment of engineers forward minimizes disruption to movement. All routes are reconnoitred in detail and maintained as necessary. They are marked to facilitate movement at night. This is particularly important for routes through obstacles. Waiting areas adjacent to routes are selected. A program of routine route reconnaissance confirms trafficability.

e. **Order of March**. The order of march positions troops in the order required for the task. It also enables the battle group to fight en route if required, with advanced and flank guards deployed. Reconnaissance elements lead to warn of obstructions, including scatterable mines and enemy contacts and to report on the situation in the battle area.

f. **Control**. Control measures, including designation of routes and waiting areas, assembly areas, attack positions, LDs, objectives, blocking positions, phase lines and traffic control, are used to avoid or minimize the use of radios.

7. The main points to consider for reconnaissance and liaison are as follows:

a. routes, alternate routes, waiting areas, assembly areas and objective areas must be reconnoitred in detail;

b. commanders at all levels conduct reconnaissance to be fully conversant with their tasks and responsibilities;

c. liaison is conducted with -

(1) all units that one passes through en route to the objective,

(2) units in the immediate vicinity of the objective, and

(3) engineers involved in obstacle development; and

d. detailed plans are coordinated with formation headquarters through a liaison officer (LO).

8. Rehearsals are conducted forward, if the situation permits, or they may be conducted in rear areas on similar terrain. Rehearsals should be conducted by day and by night, but they may be restricted to night-time for security.

9. Blocking forces are tasked in the first instant from depth units and then if necessary from the reserve. Blocking tasks are assigned by the formation commander to support his plan; he avoids depleting his reserve, saving it for the primary task of counter-attack. If all he can hope to achieve is containment and stabilization, because of the size of the enemy penetration, the reserve blocks as a prelude to a higher formation counter-attack. Blocking involves:

a. moving to a blocking position;

b. augmenting the fire of the in-place force to defeat the enemy penetration; and

c. containing the enemy until a counter-attack is launched.

10. Hasty blocking tasks are conducted to contain enemy penetrations in unexpected areas, or in areas where he has achieved overwhelming strength. Hasty blocking usually requires quick response to a critical situation. The success of a hasty blocking task depends on quick reaction, decisiveness and the initiative of commanders. Battle procedure is abbreviated. The aim is to deploy quickly whatever forces are immediately available, and to strengthen the position as more troops arrive. A likely sequence of action is:

a. Issue a Warning Order, including orders to commence movement to the objective area. A waiting area near the objective may also be assigned.

b. Attempt to gain further information on the enemy from available sources, including formation headquarters, in-place force and aviation elements.

c. Do a map study to arrive at critical timings.

d. Complete an estimate.

e. Give radio orders on the move, confirming details in the warning order and ordering initial deployment and tasks selected from the map. If possible this should be done early enough to avoid using a waiting area, so that troops can move directly into position.

f. Deploy to battle positions without further orders or reconnaissance. Junior commanders use their initiative to adjust their positions if needed and to co-ordinate arcs of fire.

g. Battle group and sub-unit commanders co-ordinate, adjust and improve positions as necessary, possibly while in contact with the enemy.

11. Deliberate blocking is planned in detail and conducted from prepared positions. For each task, battle group or sub-unit commanders establish:

a. a movement plan for the occupation of the position;

b. a coordinated defence plan, including supporting plans;

c. critical timings for movement forward and occupation, which are passed to formation headquarters; and

d. priority of work for the preparation of defence.

12. **Command and Control**. Additional sub-units committed to blocking In a battle group area, come under the command of the in-place battle group once deployed. These sub-units join the in-place battle group command net as early as possible to keep abreast of the situation and co-ordinate their movement into location.

13. **Counter-attack**. The aim of the counter-attack is to regain lost ground or defeat the enemy. Counterattacks may be hasty or deliberate. Hasty counter-attacks are not conducted by formations. Rather, they are conducted by battle group and sub-unit to attack the enemy when he is vulnerable - during consolidation after his attack.

14. At formation level, deliberate counter-attacks are conducted by the formation reserve. Counter-attacks tasks are planned and assigned by the formation commander to support his plan. He aims to use his reserve to defeat enemy penetrations once they are contained and the situation has stabilized. Once the reserve has been committed, any further countermoves require the commitment of higher formation forces.

15. **Deliberate Counter-attacks**. Deliberate counter-attacks are planned and coordinated in detail. The formation commander in his initial plan, anticipates likely counter-attack tasks and places them in priority. The battle group then reconnoitres and makes contingency plans for each task, including:

a. **Assumptions**. The situation paragraph should be replaced by planning assumptions, either laid down by the formation commander or made by the battle group commander himself -

(1) likely strength and disposition of the enemy,

(2) forces available for the attack, and

(3) friendly forces remaining effective in the area and the degree of support, if any, which may be expected from them.

These assumptions will not predict the exact situation at the time of the counter-attack; but they will help to develop an outline plan.

b. **Alternate Plans**. The commander may develop one or more alternate plans for each counter-attack task. The final selection of the plan, with modifications as necessary, is made prior to the attack, when more information is available. His plans cater for the possibility of an attack by day, by night or in conditions of reduced visibility.

16. For each counter-attack plan the battle group commander establishes:

a. a movement plan including assembly areas, attack positions and fire support positions;

b. coordinated fire support plan for all fire including artillery, in-place forces and own troops;

c. groupings and tasks for reconnaissance, assault, fire support, flank protection, consolidation and exploitation;

d. order of march based on assigned tasks; and

e. tactical controls such as LD, axis, boundaries, objectives, phase lines, fire support co-ordination lines and limits of exploitation.

17. The counter-attack force moves from its assembly area, through an attack position and across the LD. Initially it does not close with the enemy. Part of the force takes up a fire position, preferably on key terrain, overlooking the killing zone and engages the enemy. This fire is complemented by artillery, close air support and attack helicopters, if available. The timing of the counter-attack is critical. Every effort is made to contain the enemy and strike him when he is off-balance. If the counter-attack is too soon, it may be met by an aggressive enemy who is still advancing. If it is too late, the enemy may have reinforced his force and consolidated his position. Once the counter-attack force and the in-place force have neutralized the enemy, the assault can begin. This may be the responsibility of the counter-attack force, the in-place force, or both. Mopping-up, clearing pockets of resistance and collecting enemy stragglers, is an infantry task, supported by tanks and artillery. With the counterattack the limit of exploitation is more restrictive than in the attack. Defence of the sector is re-established as quickly as possible. Following the counter-attack, the attacking troops are dispersed rapidly to avoid becoming a target and to prepare for subsequent tasks.

18. **Command and Control**. The formation commander retains overall command of the blocking and counter-attack battle from his tactical command post. If he is unable to do this he delegates command of the battle to either the counter-attack or blocking force commander depending on who has the larger force.

410. ADMINISTRATION

1. Administrative considerations have been made in the appropriate parts of this section. In summary these are:

   a. the heavy demands for mines, defence stores and ammunition;

   b. the achievement of a balance by dumping forward;

   c. the vulnerability of administrative echelons to ground and air attack; and

   d. the restriction of movement by day resulting in the conduct of dumping and replenishment by night.

SECTION 3

DELAY

411. GENERAL

1. The delay is defensive in nature; however, it may be conducted in conjunction with offensive operations.
It is conducted for any of the following reasons:

   a. to slow the enemy's advance and reduce his offensive capability by inflicting casualties;

   b. to determine the enemy's main point of attack;

   c. to protect the deployment and preparations of forces tasked with other operations;

   d. to channel the attacker towards an area or, to place him in a position which leads to his destruction; or

   e. in the case of flank or rear guards, delaying actions are fought for one or more of the following reasons -

      (1) to allow the main force time to react to the new threat,

      (2) to prevent the enemy from interfering with the main force,

      (3) to stop the enemy from gaining information concerning the actions of the main force, and

      (4) to permit the main force to disengage and move away from the enemy during a withdrawal.

2. This Section describes battle group delaying actions as part of the covering force battle.

412. PRINCIPLES OF WAR AND TACTICS

1. In a delay, the battle group attempts to inflict heavy losses on the enemy, while conserving its own strength.
In developing the tactical plan the following principles are stressed:

   a. **Offensive Action**. Although the general initiative rests with the enemy, battle group commanders create and seize opportunities for offensive action. An enemy force that overreaches itself or exposes a flank is particularly vulnerable. Limited attacks are undertaken when losses or damage can be inflicted on the enemy with reasonable risk.

b. **Security and Protection**. Security and protection are essential to avoid surprise and an unwanted decisive engagement. They are achieved not only by using concealment, camouflage, deception, communications security, electronic warfare and counter-intelligence measures; but also, by the protection of crossing sites, particularly bridges, and other critical points along routes or axes.

2. In addition to the principles of war stressed in the delay, the following tactics are useful:

a. **Fire and Movement**. Shooting at long range surprises and confuses the enemy and makes him pause and deploy. Such fire imposes caution and causes casualties on the enemy without revealing the disposition of our troops. Battle groups disengage and move to new positions when the enemy concentrates.

b. **Maintaining a Balanced Effort**. Battle groups are organized so that they can deal with unexpected situations. This requires a judicious balance in the number of troops maintaining surveillance, conducting reconnaissance, engaging the enemy, withdrawing to new delaying positions and in reserve.

c. **Maintaining Contact**. Battle groups maintain contact with the enemy to avoid being surprised, to determine his rate of advance and his direction.

d. **Effective Use of Ground**. Battle groups use terrain to force the enemy to conduct time-consuming and costly attacks in order to advance. The terrain selected has natural or easily improved obstacles, that canalize the enemy and slow him down. It offers good observation and fields of fire and allows for easy disengagement.

e. **Trading Space for Time**. Usually it is the amount of time needed to prepare the defence that determines the delaying period. The covering force area has to have sufficient depth otherwise the duration of the delay has to be shortened, or there has to be a compensating increase in the strength of the covering force, or the acceptance of high losses.

413. CONCEPT

1. The delay comprises a combination of defensive and offensive actions. It is continuous fire and movement that forces the enemy to deploy over and over again. Within the formation commander's overall plan, battle groups usually occupy a series of delaying positions from which they may either break contact behind other delaying forces, or withdraw to their next positions in depth. Delaying forces engage the enemy, especially reconnaissance forces, and conduct limited attacks until decisive engagement is threatened. To avoid decisive engagement forces disengage or fight their way back to the next delaying position. This process is repeated until the mission is accomplished at which time the battle group breaks contact with the enemy, then passes the responsibility to the in-place force. At no time during a delay may a commander accept decisive engagement without the authority of his superior.

414. FORMATION COMMANDER'S DIRECTION

1. The formation commander provides the battle group commanders with:

   a. general locations of the initial and subsequent delaying positions;

   b. either the length of time that the enemy is to be delayed or simply an order to cause maximum casualties bearing in mind the next mission;

   c. locations and tasks of friendly forces providing the screen, flank guards, rear guards and demolition guards;

   d. support allotted to battle groups;

   e. control measures such as phase lines, report lines, boundaries and reserved routes;

   f. barrier plan including preliminary and reserved demolitions;

   g. co-ordination for the rearward passage of lines; and

   h. areas to be occupied and subsequent tasks once the delaying mission is accomplished.

415. PLANNING FACTORS

1. **General**. Parts of the plan are similar to those for the defence and the withdrawal, described in Sections two and four. Defensive plans for each delaying position are prepared in as much detail as possible. Time is limited and battle group commanders rely on sub-unit commanders to complete detailed planning. These plans are kept simple and flexible so that they can deal with unexpected developments. The battle group commander's plan is derived from formation commander's direction with particular attention to the aspects discussed in the following paragraphs.

2. **Forces and Tasks**. Essential elements in the battle group include:

   a. **Tanks**. The firepower, mobility and protection of tanks make them particularly suitable for delaying operations. Armour-heavy battle groups are employed most frequently in delaying operations and are limited only by close country and built-up areas.

   b. **Infantry**. Infantry participate in delaying operations particularly In close country and built-up areas where the enemy is engaged at short range.

   c. **Tank Destroyers**. These are not normally involved in delaying operations. They are better suited for the main defensive battle.

d. **LRAAWs**. The stand-off capability of LRAAWs is a great asset in fighting the delay.

e. **Field Artillery**. Artillery fire slows or halts the enemy and assists our troops to disengage. The full range of artillery munitions is used: to blind the enemy, destroy his armour, and mine approaches or flanks. Artillery is manoeuvred so that it provides continuous fire support.

f. **Air Defence Artillery**. Delaying operations are usually conducted under an adverse air situation. Air defence resources are limited and priorities for the protection of delaying positions, mobile elements and crossing sites and defiles are established.

g. **Engineers**. Engineers prepare and improve obstacles including minefields and demolitions. Nuisance minefields are particularly useful in delaying the enemy. Engineers also improve and maintain routes and crossing sites to enhance manoeuvre. The responsibility for obstacles, such as reserved demolitions, including arrangements for their security and the closure of lanes must be clearly specified. Sub-unit commanders must know which lanes and crossing sites are open for their use. Engineers move with the subunits in contact to undertake route denial, fire demolitions, breach obstacles and lay mines.

3. **Grouping**. A balanced combat team (equal infantry and tank components) offers flexibility and freedom of action for the commander and problems of command, control and regrouping may be avoided.

4. **Selection of Delaying Positions**. Positions are far enough apart to cause the enemy to reorganize before continuing his advance. They dominate enemy approaches and offer:

a. good fields of fire and observation;

b. natural obstacles to the front and flanks or locations in which man-made obstacles can be developed easily; and

c. good withdrawal routes.

5. **Manoeuvre**. The depth and width of the battle group commander's area of responsibility affects his manoeuvre plan. If the area is wide he may decide to delay on positions across the whole area. Deployment, in this case, resembles a linear defence, with little depth and perhaps gaps. Here the use of mobile elements and reserves is stressed. Conversely, if the area of responsibility is narrow the battle group commander may decide to delay on a series of intermediate positions.

6. **Reserves**. The battle group commander maintains a reserve, particularly if the frontage is extended and depth is difficult to achieve. The reserve, ideally tanks or long range anti-armour

weapons, may be small or may consist of forces not in contact. It is used to block penetrations, extricate sub-units and counter-attack.

7. **Obstacles**. The obstacle plan is prepared at formation level but the battle group commander is able to influence the detailed siting of obstacles in his area of responsibility, as well as augment and improve obstacles, with the concurrence of the formation headquarters. Well sited obstacles can significantly delay the enemy's advance, but they must not impede the movement of the battle group or other friendly forces. The battle group commander may be authorized to fire some reserved demolitions and employ some scatterable mines. Preliminary demolitions are fired by the engineers as soon as they are ready.

8. **Surprise and Deception**. Security is maintained through concealment, disciplined movement and control of electronic emissions until contact is made. Within the formation deception plan, there may be ample scope for the battle group to employ deception techniques to delay and confuse the enemy.

9. **Reconnaissance**. Reconnaissance by all organizations is never a wasted effort. A good knowledge of the ground is a great advantage.

10. **Co-ordination**. The following is coordinated:

a. offensive air support and indirect fire;

b. routes and movement;

c. flank and rearward liaison between sub-units and between battle groups;

d. rearward passage of lines, particularly at the handover line; and

e. administrative support with particular emphasis on replenishment of combat supplies and casualty evacuation.

11. **Night or Periods of Poor Visibility**. Operations are slowed because movement is more difficult and caution is exercised in identifying friendly and enemy troops. Battle group commanders should attempt to maintain greater separation from the enemy to avoid confusion. Indirect fire and long-range weapons with thermal imagery capability, are used as much as possible. At night white light illumination can expose and disrupt the enemy.

416. CONDUCT

1. A delaying force begins by engaging the enemy at a distance and attacking him suddenly from ambush positions, causing damage and confusion that disrupts his advance. Then, just as quickly, the force breaks contact. The enemy, ground and authority to withdraw forces are major considerations in selecting types of engagements. Engagements are meant to inflict maximum casualties and delay at minimum cost. Infantry are most effective in close country and built-up

areas, while armour and LRAAWs are most effective in open country. Infantry fight from defensive positions which act as pivots for the manoeuvring armour.

2. Offensive air support, artillery and mortars are used continuously to harass and disrupt the enemy's advance. Covering and defensive fire supports the manoeuvre and withdrawal of the force. FOOs and FCs remain well forward to continue engaging the leading enemy units.

417. METHODS OF DELAY

1. The two methods of fighting delaying actions are:

   a. delaying on successive positions; and

   b. delaying on alternating positions.

2. **Delaying on Successive Positions (Caterpillar).** This method is illustrated in Figure 4-4. Sub-units delay continuously on and between each position and ground is never given up unnecessarily. The sequence is as follows:

   a. The approaching enemy is engaged at a distance and as he advances he is engaged by shorter range weapons. The volume of fire is increased. The purpose is to disorganize the enemy and force him to stop and deploy his force for an attack.

   b. Sub-units avoid close combat. When the enemy threatens to close with or outflank the position and the maximum delay has been achieved, troops withdraw to the next position.

   c. When the order to break contact is received, a part of the delaying force moves to the next position. The remainder of the force, strong in armour, maintains contact with the enemy and continues to cause delay as it withdraws to the next position. When the enemy has advanced within range of the next position, the defenders cover the final withdrawal of the part of the force that is in contact. The withdrawing force now rejoins the troops occupying the new position. When the reunited force can no longer hold the position without becoming decisively engaged the procedure is repeated.

   d. During the course of action, engineers or pioneers fire demolitions, close lanes in the minefields and prepare other obstacles as time and material permit. Scatterable mines are used to impose further delay in accordance with higher formation policy.

3. **Delaying on Alternating Positions (Leapfrog).** This method is illustrated in Figure 4-5. When using this method two or more sub-units manoeuvre along the same axis. One occupies the first delaying position and engages the enemy. The second occupies and improves the second delaying position. The sequence is as follows:

a. The sub-unit on the first position forces the enemy to deploy at long range. It withdraws to avoid close combat, or on order through or around the sub-unit on the second position to the rear, then proceeds directly to the third delaying position.

b. The sub-unit on the second position engages the enemy to force him to deploy. The procedure is repeated, with each force being alternately in contact and responsible for causing delay. When not in contact, the rear sub-unit is responsible for improving the position they are occupying and giving covering fire for the withdrawal of the sub-unit in contact.

A depth sub-unit is normally identified as the reserve when this method of delay is used. Delay on alternating positions gives more time for the improvement of delaying positions and opportunity for troops to be out of action.

4. LRAAWS and anti-armour platoon MRAAWs may be grouped with sub-units or controlled by battle group headquarters. LRAAWs conduct long-range engagements, covering manoeuvre and gaps and providing flank protection.

5. Reconnaissance troops/platoons screen flanks and gaps between sub-units, reconnoitre and secure routes, control traffic and maintain contact with adjacent units.

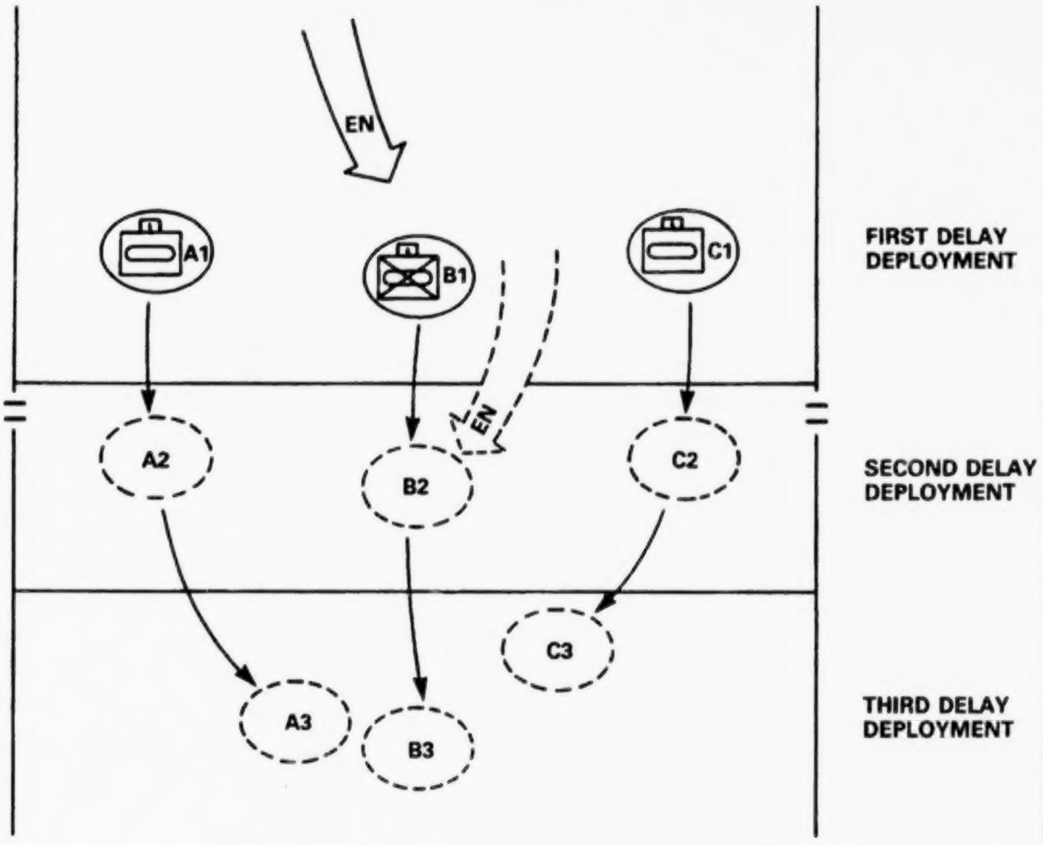

EN
A1
B1
C1
FIRST DELAY DEPLOYMENT
EN
A2
B2
C2
SECOND DELAY DEPLOYMENT
C3
A3
B3
THIRD DELAY DEPLOYMENT

Figure 4-4 Battle Group Delaying on Successive Positions

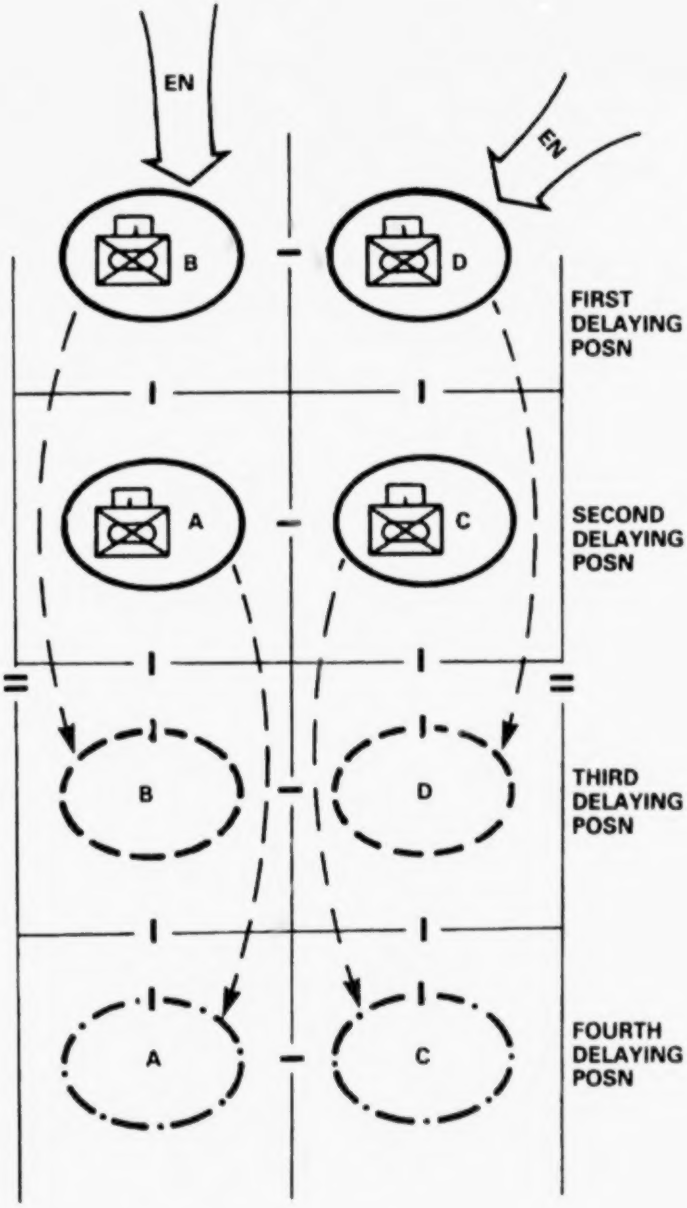

EN
EN
B
D
FIRST DELAYING POSN
A
C
SECOND DELAYING POSN
B
D
THIRD DELAYING POSN
A
C
FOURTH DELAYING POSN

Figure. 4-5 Battle Group Delaying on Alternate Positions

418. COMMAND AND CONTROL

1. Using either method of delay, the battle group commander co-ordinates the action of sub-units along delaying lines so that sub-units are not outflanked. They must be fully aware of the degree to which sub-units are engaged to avoid decisive engagement and to employ the reserve where and when required. The strength of the reserve is balanced with the need for flank protection and security of withdrawal routes. The speed of delaying operations requires simple command arrangements that can cope with changing situations. Regrouping is avoided as much as possible. The battle group commander encourages the sub-unit commander to use his initiative to defeat the enemy. If prior reconnaissance was not possible, reconnaissance parties are dispatched to each delaying position to prepare for a quick occupation. The following is essential for control and co-ordination in the battle group:

a. the locations of initial and subsequent delaying positions;

b. the length of delay time to be achieved;

c. engagement policies;

d. locations and tasks of adjacent friendly forces including contacts that must be established;

e. support allotted to sub-units including anti-armour, artillery reconnaissance, engineers, and air defence;

f. control measures such as phase lines, report lines, bounds, routes, axes and boundaries throughout the entire area of the operation;

g. actions at obstacles including preliminary and reserved demolitions;

h. co-ordination measures for rearward passage of lines;

j. reconnaissance of delaying positions prior to occupation;

k. reliable communications;

m. having authority for early withdrawal; and

n. commanders being well forward to observe.

419. ADMINISTRATION

1. In delaying operations the fluid nature of the battle greatly affects administrative planning. Formation administrative staffs ensure that:

a. combat supplies are forward, possibly dumped on delaying positions;

b. air evacuation is available for casualties; and

c. additional recovery resources are provided to battle groups.

2. Battle group administrative echelons are forward to replenish troops in contact continuously, but not so far forward to interfere with manoeuvre or risk contact with the enemy. Battle group commanders ensure that:

a. plans are developed to resupply subunits either by day or by night; and

b. administrative elements are organized to do their job, if necessary with assistance from formation.

SECTION 4

WITHDRAWAL

420. INTRODUCTION

1. In the withdrawal the formation commander disengages his force from the enemy who has the overall initiative, superior strength and air superiority. If the withdrawing force is in close contact with the enemy, it attempts to disengage; achieving a clean break and avoiding a running fight. Unlike the delay, where it is usually necessary to occupy one or more intermediate positions, depending on the tactical situation and the distances involved, the withdrawal can be directly into a new defensive position.

2. A withdrawal is not to be confused with a retirement which is a movement away from an enemy by a force out of contact. A retirement is administrative in nature and is not discussed further.

3. In the withdrawal battle groups may be employed as:

   a. all or part of a covering force, as described in Section two, to provide security for the withdrawing force; or

   b. part of the main body withdrawing to a new defensive position.

4. The withdrawal may be conducted for any of the following reasons:

   a. to disengage as the aim of the operation has been achieved;

   b. to disengage as the continuation of the operation offers no prospect of success;

   c. to draw the enemy into an unfaVOUrable situation;

   d. to conform to the movement of adjacent friendly forces;

   e. to allow the use of the force elsewhere;

   f. to ensure the safety of troops when nuclear weapons are used; and

   g. to disengage for logistic reasons.

5. Battle groups may conduct hasty or deliberate withdrawals. Hasty withdrawals are conducted when defending battle groups are forced to abandon their positions without adequate warning. Deliberate withdrawals are planned and coordinated in detail.

6. This Section describes the withdrawal of a battle group, as part of the main body, to a new defensive position.

421. PRINCIPLES OF WAR

1. In the withdrawal the following principles of war are stressed:

   a. **Security**. It may be difficult to prevent the enemy from anticipating a withdrawal, particularly after an unsuccessful action. The best use of reconnaissance, surveillance, deception, and protective measures, such as cover and concealment may hide the preparation from the enemy.

   b. **Surprise**. Although difficult to achieve, a degree of surprise is necessary for a force to withdraw successfully from the enemy. It is achieved largely through deception and speed. Activities are maintained at a normal rate; however, the conduct of limited offensive actions may cover the operation and catch the enemy off guard. A withdrawal in poor weather or in conditions of reduced visibility, particularly darkness, helps to achieve surprise.

   c. **Maintenance of Morale**. A withdrawal can strain morale. At the earliest time permitted by security, troops are briefed on the purpose of the operation. The positive aspects are emphasized. Commanders at all levels remain forward to lead their men and maintain control. Rumours must be squashed and opportunities for offensive action must be seized. The provision of adequate combat supplies and the prompt evacuation of casualties, does much to instill and maintain confidence.

422. CONCEPT

1. The aim is to achieve a clean break from the enemy. This is achieved by using a covering force to fight delaying actions in front of the main body which moves to a new defensive position, either directly or through one or more intermediate positions. The covering force, usually an armour-heavy battle group, fights delaying actions between positions to cover the rearward movement of the main body. Main body battle groups, usually infantry-heavy, may occupy intermediate positions or move directly to prepare new defensive positions. Before the present positions are abandoned the covering force deploys behind them to begin a delaying action. Once the required delay has been achieved at the intermediate position the troops are withdrawn to the next position, which may be another intermediate or the new position. Ambushes and counter-attacks may be used to slow the enemy, cause attrition or extricate friendly forces in contact.

2. There are four overlapping stages in the concept of operations:

   a. Thinning out is the early evacuation of non-essential elements of the force, particularly the wounded, and backloading of vehicles, equipment and supplies not immediately required in the forward area.

   b. Preparations include the development of intermediate positions, redeployment of artillery, development of obstacles, firing of demolitions and the implementation of deception measures.

c. Disengagement and withdrawal of the main body commences.

d. Protective and delaying actions are conducted by the covering force and security elements.

423. FORMATION COMMANDER'S DIRECTION

1. The process starts with the receipt of the formation commander's direction to the battle group commander:

a. the time that positions must be denied to the enemy;

b. the time before which there will be no rearward movement, except for reconnaissance parties and normal administrative traffic;

c. in addition, the formation commander may order some or all of the following timings -

    (1) thinning out begins,

    (2) the position is finally abandoned,

    (3) all troops are clear of a line to the rear of the positions to be abandoned, allowing supporting artillery and aircraft to engage enemy beyond this line, and

    (4) the time battle groups are ready to fight in their new positions;

d. covering force tasks and intermediate positions;

e. battle group withdrawal routes;

f. intermediate positions and areas that battle groups are to occupy once they have withdrawn;

g. the length of time the enemy must be delayed at intermediate positions;

h. locations and tasks of friendly forces providing flank guards, rear guards and demolition guards;

j. route denial tasks and control;

k. support allotted to battle groups;

m. control measures such as phase lines, report lines, routes, boundaries, fire support co-ordination lines and traffic control;

n. security and deception measures;

p. co-ordination measures for the rearward passage of lines; and

q. policy for the destruction of equipment and combat supplies.

2. Normally a commander does not order a withdrawal unless he is authorized by his superior commander. In some cases, a superior commander may order a subordinate commander to withdraw and provide him with a detailed operation order. In other cases, particularly in unfavourable circumstances, he may provide only the authority to withdraw and minimum direction. The hasty withdrawal is described in Article 428.

424. DAY AND NIGHT WITHDRAWALS

1. In a withdrawal by day or by night battle groups:

a. defend the position until permitted lo vacate it;

b. abandon the position and make a clean break from the enemy;

c. prepare to conduct a fighting withdrawal; and

d. concurrently with the above reconnoitre and begin preparation for their next task.

To achieve this, security and surprise are emphasized in both planning and execution. For this reason the deliberate withdrawal normally takes place at night, despite the increased difficulties of control, unless the formation plan or time limitations on the battle group's next task dictate a daylight withdrawal.

2. **Withdrawal by Day**. This is difficult because it may be conducted under enemy observation and fire. Navigation and control is easier by day, but a clean break is difficult to achieve. The sequence for a withdrawal by day is as follows:

a. reconnaissance parties deploy to intermediate or new positions;

b. non-essential elements are thinned-out;

c. a covering force is established;

d. patrols are withdrawn;

e. forward troops in contact are withdrawn; and

f. troops in depth are withdrawn through the covering force.

3. **Night Withdrawal**. A clean break is easier to achieve by night, or in conditions of reduced visibility, because it is difficult for the enemy to detect the movement and bring effective fire to bear. If normal activity continues on the position until the last possible moment the chance of achieving a clean break is greater although navigation, control and surveillance are more difficult. Daylight reconnaissance and strict noise and light discipline are required. The sequence for a withdrawal at night or in conditions of reduced visibility is as follows:

a. reconnaissance parties deploy to intermediate or new positions;

b. non-essential elements are thinned-out;

c. a covering force is established;

d. troops in depth are withdrawn;

e. patrols are withdrawn; and

f. forward troops in contact are withdrawn through the covering force.

425. WITHDRAWAL PLAN

1. **General**. Whether the withdrawal is conducted by day or at night, the battle group commander incorporates the formation commander's direction and the stages of the withdrawal into the detailed planning. The overall plan is simple, avoiding complicated manoeuvre and regrouping, and sufficiently flexible to respond to unforeseen enemy actions. Throughout the withdrawal particular attention is given to passive and active measures to achieve security and surprise. The battle group commander may augment formation security and deception measures with his own, provided these are compatible with and approved by the formation. They may include:

a. **Passive Measures -**

(1) **Radio Security**. No reference is made to the withdrawal over any unsecure radio net. Unless radio silence is already in force, every effort is made to maintain the normal pattern of routine radio traffic until the withdrawal is complete.

(2) **Maintenance of Routine**. Any established routine for harassing fire, artillery adjustment, vehicle and echelon movement, patrols, etc, is maintained.

(3) **Movement**. Firm control is imposed on reconnaissance and thinning out.

b. **Active Measures -**

(1) Radio deception is conducted at formation level.

(2) Artillery, mortars, tank fire and illumination cover the noise of movement and distract and blind the enemy.

(3) Battle noise simulation, lights and noise to simulate occupied fortifications, continues after the withdrawal is complete.

2. **Thinning Out**. The thinning out of the battle group must not compromise security. The best time is at night under cover of deception plans. Non-essential elements, equipment and combat supplies are withdrawn early. Battle group administrative echelons are reduced to the bare essentials. Reconnaissance parties and advance elements needed for future operations are also withdrawn. Reconnaissance parties include seconds-in-command from all levels. Time and space may preclude the return of reconnaissance parties. In this case the battle group commander gives orders for the withdrawal and preliminary orders for new tasks to the reconnaissance parties. Reconnaissance parties later receive and deploy the battle group and the battle group commander issues confirmatory orders. The battle group commander balances the number of troops in the reconnaissance party with requirements for security and sufficient strength remaining to defend the position. During this stage, to maintain strict control of rearward movement and to prevent the loss of surprise, reconnaissance parties from all levels move together.

3. **Preparation**. At formation level the redeployment of artillery, deployment of the covering force and commencement of deception measures occurs. Preparation of intermediate and new positions continues. The majority of engineers are withdrawn to begin preparing the intermediate and new defensive positions. Some engineers remain to assist in delaying the enemy. The preparation of obstacles along withdrawal routes is done as early as possible. Obstacles not requiring the use of explosives are used to the fullest extent. Preliminary demolitions are coordinated with the manoeuvre plan and executed without compromising security.

4. **Disengagement and Withdrawal**. This stage of the operation is accomplished as quickly and as quietly as conditions permit, ensuring that sufficient strength remains forward until denial time. Security is maintained and movement is planned and controlled to avoid detection and reaction by the enemy.

5. **Security**. In addition to passive and active measures for security and surprise, the following are important considerations in planning the withdrawal by day or night:

a. Artillery and mortars are required for all their normal defensive fire and illuminating tasks and may also be needed to provide noise, smoke, or blinding illumination to conceal movement. FOOs and FCs remain forward, with their respective commanders, until the last troops vacate the position. Scatterable mines may be used to delay the enemy and for flank protection. The battery commander prepares a Continuous Fire Support Program to cover the complete withdrawal and he remains with the battle group commander throughout.

b. Tanks, TDs, LRAAWs and MRAAWs remain on the position as long as possible to provide anti-armour fire to the front and flanks. Tanks also are part of the reserve.

c. Some infantry is needed until the last minute: to man essential observation posts and standing patrols, provide protection for the tanks and anti-armour weapons, and to form part of the reserve. The rest of the infantry is withdrawn as early as possible to prepare the next defensive position. APCs are normally employed on or near battle positions, in locations where their cannons can be effective. Some APCs may be in hides to the rear of battle positions. Infantry thin out moving back to their APCs. Alternatively, if the infantry withdraws with tanks, APCs not in battle positions move forward and pick up the infantry. In any case, all vehicles that remain forward until abandonment are armoured.

d. The forward troops act as offensively as possible up to the time of final abandonment. Hasty counter-attacks may be mounted to assist in making a clean break. Even if there is a covering force the battle group maintains its own reserve.

e. Air defence detachments provide continuous protection concentrating on defiles and choke points along the withdrawal routes.

f. Reconnaissance troops/platoons provide security forward and to the flanks. To the greatest extent possible they assume responsibility for surveillance tasks to free observation posts and patrols to rejoin their sub-units. There are too many surveillance tasks for reconnaissance troops/platoons to be used in route reconnaissance.

g. Engineers and assault pioneers assist the battle group in maintaining its mobility by clearing and improving withdrawal routes. Booby traps and mines are left on the position; abandoned stores and equipment are destroyed. Withdrawal routes are closed with demolitions and mines as the battle group passes through. The assault pioneers are particularly important as the engineer work is directed towards developing either intermediate positions or new positions. The use of engineer equipment reduces time required for preparations.

h. Aviation resources are employed at formation level for Air OP, reconnaissance, flank security and anti-armour tasks. Observation helicopters may be allocated in support of battle groups and are particularly useful for conducting artillery engagements and for surveillance. Transport helicopters may be used to move defence stores, redeploy OPs and evacuate casualties.

6. **Movement**. Some ground provides cover and concealment during the withdrawal. Direct cross-country routes, avoiding roads and defiles, are best. Sub-unit movement is covered by artillery fire, during the disengagement, and by the covering force and troops in intermediate positions, later in the withdrawal. The movement plan includes:

a. separate routes for vehicles and marching troops;

b. arrangements for route reconnaissance, route marking, traffic control and guides;

c. information concerning the firing of demolitions and destruction of withdrawal routes;

d. location of check points, RVs, and report lines;

e. the order of march;

f. timings;

g. arrangements for rearward passages of lines;

h. recognition signals, such as guns over back decks, lights and aircraft marker panels; and

j. location of areas of responsibility, including delaying actions.

7. **Protective and Delaying Actions**. See Section three, where these actions are described as part of the covering force operation. A withdrawing battle group commander plans for a hasty defence, or assisting the covering force at any time during the withdrawal. He keeps abreast of the situation, anticipates and maintains good channels of communication in order to react quickly. All movement is carefully controlled particularly during night withdrawals. Within the battle group, sub-unit commanders normally select routes back to sub-unit RVs. These routes and RVs are coordinated by, battle group headquarters. Routes for the battle group withdrawal are usually assigned by formation headquarters while routes from sub-units RVs to formation routes are assigned by battle group headquarters. Movement control assists the smooth, uninterrupted and rapid movement to the rear. A battle group withdrawal plan is illustrated in Figure 4-6.

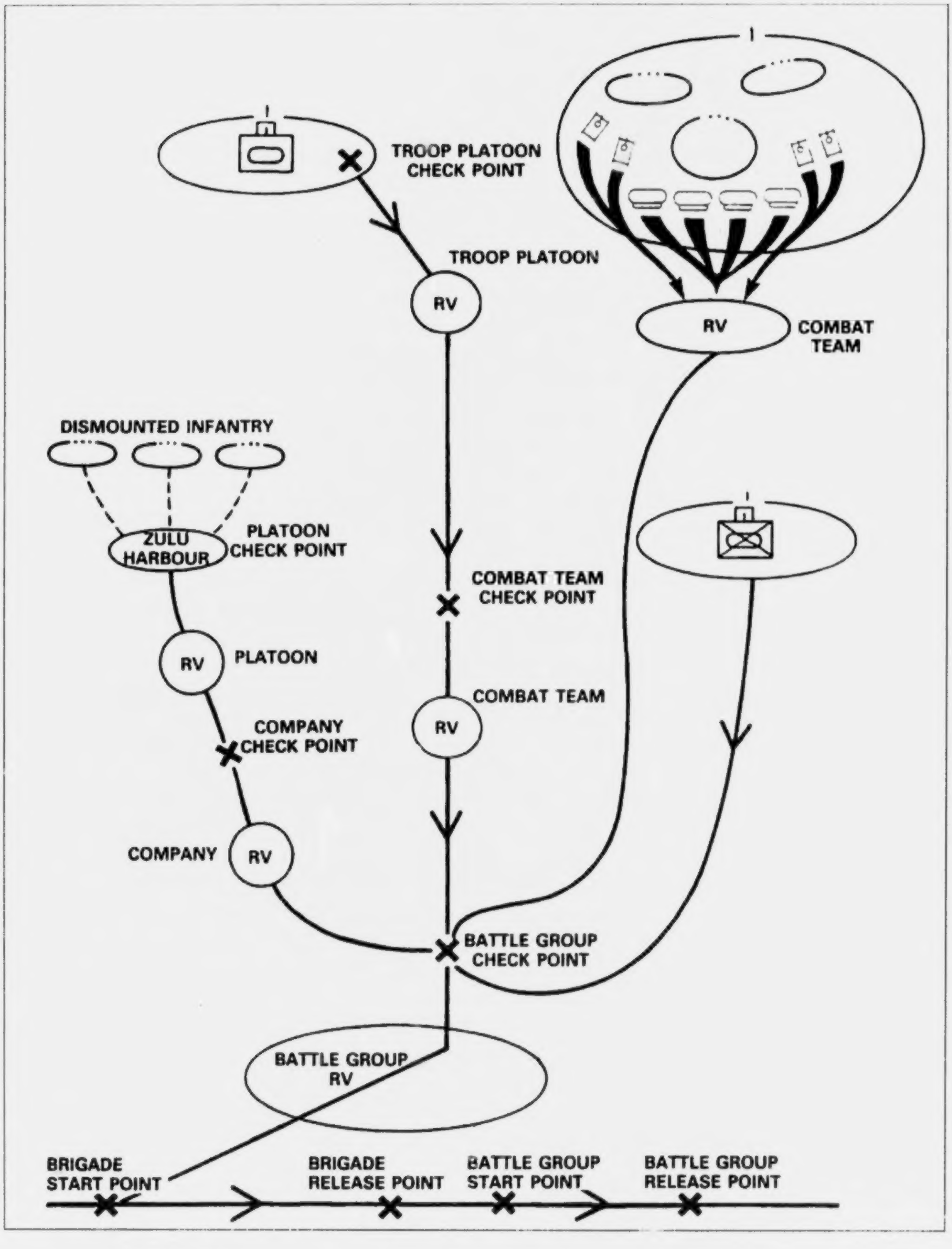

TROOP PLATOON CHECK POINT
TROOP PLATOON
RV
RV
COMBAT TEAM
DISMOUNTED INFANTRY
ZULU HARBOUR
PLATOON CHECK POINT
COMBAT TEAM CHECK POINT
RV
PLATOON
COMBAT TEAM
RV
COMPANY CHECK POINT
COMPANY
RV
BATTLE GROUP CHECK POINT
BATTLE GROUP RV
BRIGADE START POINT
BRIGADE RELEASE POINT
BATTLE GROUP START POINT
BATTLE GROUP RELEASE POINT

Figure 4-6 Battle Group Withdrawal Plan

426. CONDUCT

1. The operation can be divided into four parts, thinning out, preparation, disengagement and withdrawal.

2. **Thinning Out**. Thinning out begins at the time stated in the formation or unit withdrawal orders. It is completed quickly, using concealed routes lo the rear. Some or all of the following concurrent activities occur:

   a. Reconnaissance and planning for the next task begin. The rear reconnaissance and advance parties are dispatched as soon as possible. The battle group reconnaissance party is led by the Second-In-Command (2IC) while the sub-unit party consists of the 2IC and a representative from each platoon/troop drawn from men in the echelon.

   b. Traffic control personnel may be dispatched.

   c. The A2 Echelon replenishes all forward elements and withdraws, taking with them supplies and stores that are not being carried or needed by the fighting troops.

   d. Non-essential F echelon elements withdraw.

   e. The battle group headquarters, may be reduced by redeploying the step-up to the rear.

   f. Regrouping, if required, is completed.

3. **Disengagement**. The disengagement begins as soon as the denial time has passed and continues until the troops have made a clean break from the enemy or passed off responsibility to a covering force. During this phase, the following actions may occur:

   a. Forward troops maintain normal activity and continue to act aggressively for as long as possible.

   b. Normal fire support and communications are maintained.

   c. Local counter-attacks are launched to deceive the enemy, keep him off guard and discourage him from close combat.

   d. Sub-units move out of the forward area through RVs.

   e. The last elements to disengage attempt to depart undetected; otherwise fire support is needed to prevent enemy interference.

4. **Withdrawal**. The withdrawal begins when a clean break is achieved or responsibility for fighting the following enemy has been passed off to another force. It continues until the unit is ready to commence its next task. The following actions occur before, during and after the withdrawal:

a. elements move through a series of RVs to establish control and to allow sub-units to re-unite with their parent units;

b. guides and traffic control elements are on the withdrawal route at obstacles or other critical points; and

c. once the unit is concentrated out of contact, it withdraws on designated routes, at best speed, into an assembly area to prepare for their next task.

427. HASTY WITHDRAWAL

1. In the worst case, defending battle groups may be forced to withdraw without adequate warning. Normal battle procedure is impossible and in these circumstances the sequence of a hasty withdrawal is:

a. The battle group commander selects, from the map, a new defensive position. He orders all troops not fighting the immediate battle to move there and prepare a hasty defence. This includes not only the battle group reserve but also any sub-units or support weapon detachments which are out of contact, supporting arms and echelons.

b. Those elements in contact fight back through the new position into an assembly area immediately behind it. Troops are reorganized as they arrive and either:

(1) reinforce and improve the hasty position already established, or

(2) prepare new defences in depth.

428. ACTION ON ENCIRCLEMENT

1. In fast moving operations against a mechanized and numerically superior enemy, penetration may lead to the encirclement of sub-units or even the whole battle group. This should not necessarily be viewed as critical, especially if it provides the opportunity to attack or counter-attack the flanks and rear of enemy units. As soon as encirclement occurs, the battle group commander, or the formation commander decides whether:

a. to break out;

b. to restore the situation by a counter-attack; or

c. to provide what support he can for the encircled element.

2. This article describes the action:

   a. to be taken immediately by the encircled element; and

   b. to break out from encirclement.

3. **Immediate Action**. The surrounded battle group or sub-unit commander deploys to meet the main threat, if necessary by recapturing key terrain. He then adjusts his remaining forces to establish all-round defence. His immediate tasks are:

   a. to hold the key terrain within his area;

   b. to prevent any further penetration or fragmentation of his defence;

   c. to locate gaps and weaknesses in the enemy positions;

   d. reduce his perimeter if necessary;

   e. to establish logistics priorities; and

   f. to maintain contact with his superior commander for co-ordination of activities between his own force and those outside the encirclement.

4. **Break Out**. If a battle group or sub-unit is encircled and its relief is unlikely, the encircled troops try to break out as soon as possible. The longer the force remains encircled the weaker it becomes, both in terms of numbers and combat supplies. Delay allows the enemy to strengthen the encirclement. A break out is likely to succeed if it combines with an attack by a relief force. However, since delay in breaking out can seldom be accepted, an encircled force may have to fight out alone. Air resupply may be attempted, but the battle group must be prepared to break out without replenishment.

5. The choice of direction and timing for the break out are all important:

   a. **Direction** -

      (1) With a relatively strong force, the break out is made in a single direction. The least favourable direction is the one where the enemy is attacking; the best is across the enemy's line of advance. Factors such as deception, enemy dispositions and the ground all play a part, but surprise is essential to success.

      (2) Multi-directional efforts or escape by small groups are attempted only when the necessary strength and cohesion do not exist to attempt a break out in a single direction.

b. **Timing** -

(1) In choosing the timings for the break out, the state and deployment of the encircled troops are the key factors. Any delay in making the break out leads to further deterioration; however, the commander allows sufficient time for essential preparation and co-ordination.

(2) Darkness or reduced visibility is exploited. This is timed to coincide with diversionary moves by forces outside the encirclement.

6. **Conduct**. The break out is made in one move, tanks leading, with echelons and troops not involved in the immediate fight closely behind the leading elements. Flanks are protected and the withdrawal of the remainder of the force is timed to allow them to act as a rear guard. Stores and equipment that are not moved are destroyed and medical assistants stay behind to care for casualties who cannot be evacuated.

7. **Command and Control**. Commanders stay forward with their troops and are the last to abandon positions. Battle group and sub-unit commanders are prepared to cooperate with other friendly troops. Orders for the break out are not given too early, otherwise the enemy may be alerted in time to make a counter move.

8. Control measures including critical timings, check points, routes, RVs, phase lines, report lines and traffic control, are necessary. Land line is used until abandonment and thereafter radios are used only for enemy contacts, otherwise listening watch is maintained. Liaison with formation headquarters, adjacent units and the covering force is important before and after disengagement.

429. ADMINISTRATION

1. Commanders must keep in mind that once the withdrawal starts, access to administrative resources is limited and normally only available if the plan makes provision for specific items.

2. **Replenishment**. The actual replenishment requirements depend on the circumstances. As a guide, a full replenishment is completed before withdrawal begins. The A2 echelon remains forward to provide battle replenishment. It is organized at a suitable point, at the end of the tactical road move, prior to the unit beginning its next mission.

3. **Casualty Evacuation**. Prompt casualty evacuation in the withdrawal is vital to morale. All ranks need to know that injured men are not left behind. Evacuation is complicated during the disengagement phase and casualties may be carried in vehicles other than ambulances, until sub-units regain contact with the medical evacuation chain. It is important that all commanders know the evacuation plan including the location of medical facilities.

4 Many of the same considerations and procedures apply to the treatment and handling of stragglers.

5. **Repair and Recovery**. Battle group and combat team commanders establish priorities and set a deadline for repairs to be completed. Broken down vehicles are backloaded to the Equipment Collecting Point (ECP). Recovery resources are forward by the time the disengagement and withdrawal starts. Once the disengagement commences, orders are issued for the recovery of non operating vehicles, by whatever means possible, as well as orders for the destruction of equipment that must be abandoned.

(430 to 499: Not allocated)

ANNEX A, CHAPTER 4

SUPPORTING PLANS

SUPPORTING PLANS

1. **General**. The plan for defence incorporates a number of supporting plans which are interrelated and require co-ordination at all levels. These plans are developed in conjunction with those of adjacent units. Overlays of battle group supporting plans are then submitted to formation headquarters for co-ordination. Battle group commanders rely on the assistance of supporting arms commanders in the development, co-ordination and execution of these plans. These supporting plans are discussed in the next four appendices.

APPENDIX 1, ANNEX A, CHAPTER 4

ANTI-ARMOUR PLAN

ANTI-ARMOUR PLAN

1. **General**. The success of the defence depends on the deployment, co-ordination and control of the wide variety of anti-armour weapons in the battle group, as well as those supporting the formation defence. The formation commander creates the anti-armour plan and assigns anti-armour weapons to battle groups. Formation anti-armour weapons are illustrated in Figure 4A1-1.

2. Killing zones are established as wide and as deep as possible across the major tank approaches. These zones are tied to the ranges of infantry anti-armour weapons. Long and short range anti-armour weapons, main battle tanks and TDs are added to this framework so that the enemy is kept under continuous fire.

3. In addition to anti-armour weapons controlled by battle group commanders, offensive air support, attack helicopters, artillery and obstacles contribute to the anti-armour battle. These weapons are directed against the main enemy approach or targets of opportunity. At battle group level, the anti-armour plan is coordinated with the barrier plan and fire support plan, including close air support and attack helicopter missions. The manoeuvre of attack helicopters requires co-ordination at battle group level through the fire support co-ordination centre. Control aspects are similar to those of any other "in location" group.

4. **LRAAWs**. They are usually grouped at brigade or battle group level to fully exploit their characteristics. Initially they are sited well forward to engage enemy armour at maximum range. Ideally as the enemy advances they are moved into new positions to continue to fire while staying out of range of the enemy. With its longer range the LRAAW is ideally employed to cover critical avenues of approach.

5. **Armour**. Tanks are effective in reinforcing, blocking or counter-attacking. Tanks assigned to battle groups should remain under battle group control. Co-ordination of the anti-armour plan is the responsibility of the infantry anti-armour platoon commander. The tank squadron commander should not be asked to co-ordinate anti-armour plans other than those related to his tanks. TDs are usually grouped at sub-unit or battle group level. They are used to provide intimate direct fire support to forward sub-units and battle groups.

6. **MRAAWs**. Battalion anti-armour platoons are equipped with MRAAWs. They are also integral to infantry companies, but these may be insufficient to cover the approaches to all battle positions. Battle group commanders may attach elements of the anti-armour platoon to sub-units to provide additional punch. Others may remain under battle group control, exploiting their mobility and armour protection, to cover gaps and be deployed where they can influence the battle. They may be used with the reserve.

7. **APC Cannons** These are used to attack enemy APCs before the infantry dismount. They should be mutually supporting, firing forward and to the flanks from each battle position. The enemy, mission and the terrain determine the location of APC cannons. They may be dug in on

the battle position to provide direct fire support, or alternatively they may be located to a flank to obtain defilade fire positions and concealment. Infrequently APC cannons are held in the rear to cover likely enemy heliborne landing areas.

8. **SRAAWs**. Company weapons provide additional anti-armour fire. Both SRAAWs(H) and MRAWWs should be sited and coordinated to engage the enemy, who have not been destroyed by longer range anti-armour weapons, with continuous fire within their effective ranges. MRAAWs and SRAAWs are particularly useful in close country, covering obstacles, for patrolling and ambushing.

9. Considerations for the employment and co-ordination of anti-armour weapons are summarized as follows:

a. they must contribute to the superior commander's concept of operations;

b. fire should be concentrated on killing zones;

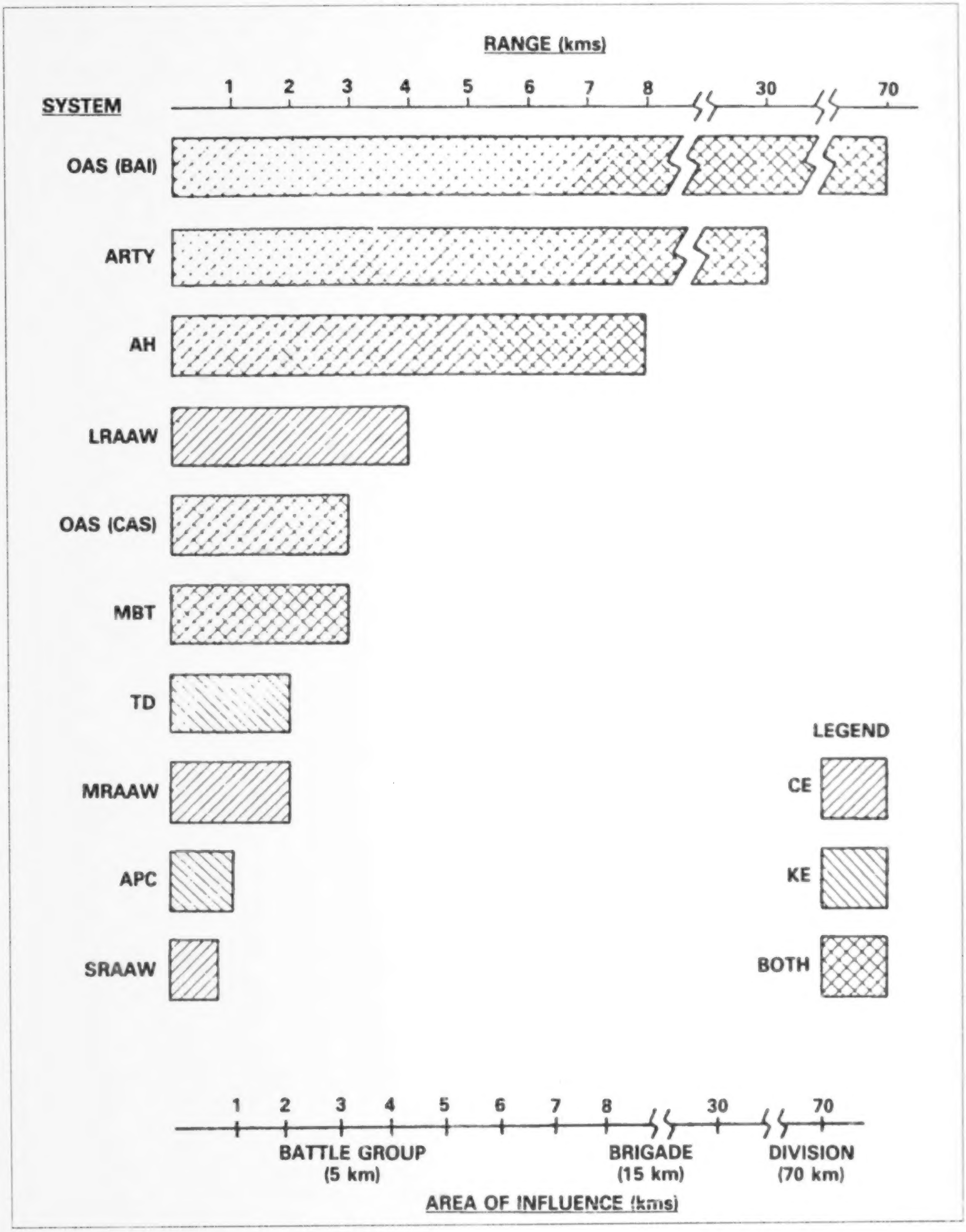


Figure 4A1-1 Range Coverage of Anti-Armour Resources

c. the co-ordination and movement control of anti-armour weapons is centralized at battle group level while the control of fire is decentralized;

d. grouping of anti-armour weapons should allow for the flexibility required by the battle group commander to influence the battle;

e. the anti-armour plan is based on detailed reconnaissance and co-ordination at all levels; and

f. boundaries must not inhibit the concentration of fire where it is needed.

10. **Command and Control**. The number of anti-armour weapon systems, their differing characteristics, and the fact that they come from different organizations, place additional demands on command and control at battle group level. Fire control arrangements include:

a. proper selection of arcs of fire;

b. open fire policy considering the need -

  (1) to open fire at the maximum effective range of the weapon systems to cause sufficient attrition,

  (2) to maintain security and maximize the effectiveness of anti-armour weapons opening fire together, and

  (3) to delegate the authority to open fire to sub-unit commanders; and

c. priorities for engagement such as

  (1) reconnaissance vehicles,

  (2) engineer equipment or tanks with rollers and plows when the enemy is breaching obstacles,

  (3) command vehicles and vehicles used by artillery observers,

  (4) tanks before APCs when the enemy remains mounted, and

  (5) APCs to force infantry to dismount if other weapons can engage the enemy at close range.

APPENDIX 2, ANNEX A, CHAPTER 4

BARRIER PLAN

APPENDIX 2, ANNEX A, CHAPTER 4

BARRIER PLAN

1. **General**. This plan comprises a series of obstacles that canalize, direct, restrict, delay or stop the movement of the enemy and cause casualties. Although the plan is prepared at formation level, it Is coordinated at battle group with other supporting plans. Engineer units building the barrier coordinate with the battle group in whose area of responsibility the barrier is located.

2. **Employment**. To be effective barriers should be constructed to take into consideration the following points:

   a. All obstacles must be covered by observation and indirect fire and should, if possible, also be covered by direct fire.

   b. Artificial obstacles should be sited to reinforce and take advantage of existing natural obstacles.

   c. The barrier plan must be fully integrated with the battle group defensive fire and manoeuvre plans and must not hinder manoeuvre.

   d. Obstacles must contribute to offensive action. Lanes should be used for patrols and gaps used for manoeuvre.

3. **Co-ordination**. Natural and artificial obstacles form part of the formation barrier plan. Although the battle group commander does not directly control the siting barrier obstacles, he may influence their location within the battle group area of responsibility:

   a. arrange local adjustments to the barrier configuration; and

   b. enhance the effects by the addition of protective minefields and point obstacles.

The battle group commander relies on the engineer adviser to co-ordinate and manage the barrier plan within his area. Engineers advise on the use of scatterable mines, but authority for their use is retained by formation headquarters.

4. **Reserved Demolitions**. Obstacles have a major impact on a commander's manoeuvre plan. The formation commander, with engineer advice, selects a number of reserved demolitions based on terrain features that are critical to the movement of his formation. These features may be bridges, routes or minefield lanes that play a vital role in the tactical plan. The battle group commander provides a demolition guard at the site to prevent the enemy from interfering with the firing. The guard varies in size from a platoon with support weapons up to entire battle group depending on the size and importance of the reserved demolition and the enemy threat.

5. **Responsibilities**. The duties and responsibilities of the key appointments at a reserved demolition are:

a. **Authorized Commander**. This is the officer who is empowered to authorize the firing of the reserved demolition. In the early stages of an operation, this authority is normally retained by the senior formation commander. However, as the operation progresses, this authority may be delegated to a subordinate commander, but not usually below formation level. Orders issued by the authorized commander to the demolition guard commander and demolition firing party commander are recorded using DND Forms 913 (English) and 914 (French).

b. **Demolition Guard Commander**. A demolition guard commander ensures that the demolition is not sabotaged or captured by the enemy before it has been fired successfully. He commands all troops at the demolition site, including the demolition firing party. He gives the order in writing, to the demolition firing party to change the state of readiness of the demolition and to fire it. He also keeps the authorized commander informed of the situation at the demolition site, the time to change from State 1 (Safe) to State 2 (Armed), and reports to him on the effectiveness of the demolition, once it is fired.

c. **Demolition Firing Party Commander**. Normally the demolition firing party comprises engineers commanded by a junior non-commissioned member. He is responsible for the technical aspects of the demolition.

6. **Planning Factors**. The demolition guard commander's plan is based on the direction of the authorized commander with particular attention to the following aspects:

a. **Enemy**. The guard commander deploys his troops to cover the most likely enemy approaches to the demolition. He ensures that his force is sited to give all round protection to the demolition itself, particularly against sabotage by refugees. Likely aircraft approaches to the demolition and helicopter LZs are covered by air defence and mobile reserves.

b. **Ground**. In planning the security of a demolition the guard commander's overriding consideration is the defence of the immediate area of the demolition including the protection of the demolition charges and the engineer firing party. Although high ground that dominates the site is occupied, this is not done at the expense of protecting the immediate area of the demolition. The crossing of any vehicle to the, enemy side of the demolition is measured against the difficulty of it returning to the home side, once the demolition has been fired.

c. **Forces and Tasks**. Essential considerations are -

(1) FOOs and FCs are sited to observe likely approaches and possible helicopter LZs.

(2) Surveillance devices are deployed on the enemy side of the demolition to give early warning.

(3) At night positions are adjusted lo concentrate the guard closer to the demolition to prevent enemy infiltration.

(4) A mobile reserve is held to reinforce or counter-attack.

(5) A checkpoint is established on the enemy side to control the movement of all withdrawing units across the site. Liaison officers located here identify withdrawing units.

(6) A road block is established to control refugee traffic and a collection point is set-up on the enemy side.

(7) The demolition guard commander and the firing party commander are collocated.

(8) An alternate firing point on the enemy side of the demolition is sited and prepared. Manning is directed by the demolition guard commander depending on the situation.

(9) Contingency plans for the withdrawal of the demolition guard from the enemy side of the demolition under various situations are prepared.

APPENDIX 3, ANNEX A, CHAPTER 4

DEFENSIVE FIRE (DF) PLAN

DEFENSIVE FIRE (DF) PLAN

1. **General**. A defensive fire plan consists of target serials to be engaged with specific weapons. The aim is to ensure that the effective fire of all available weapons is brought to bear on the assaulting enemy. There are two types of target:

   a. close DF, including FPF; and

   b. DF in depth.

2. **Close DF**. Close DF breaks up the enemy's assault while it is forming up, on the line of departure or during the assault. These targets are selected on dangerous and likely approaches. As a general rule close DF is within 600 metres of our troops. The total number of close DF targets does not exceed three per combat team battle position. More than this number tends to overload current artillery and mortar fire control systems and could degrade response times.

3. **Final Protective Fire (FPF)**. One or more close DF targets may be designated, usually by the battle group commander, as being so vital that immediate response is guaranteed. Known as a FPF the guns are loaded and aimed dt the FPF target when not firing at other tasks.

4. **DF in Depth**. Targets aimed at disrupting attack penetrations, striking reserves and command and control systems are usually referred to as DF in depth. The formation commander selects these targets.

5. **Authority to Engage DF Targets**. Commanders avoid the indiscriminate engagement of close DF targets. This discloses friendly positions unnecessarily. For this reason control of fire is retained by combat team or battle group commanders.

APPENDIX 4, ANNEX A, CHAPTER 4

SURVEILLANCE AND TARGET ACQUISITION PLAN

APPENDIX 4, ANNEX A, CHAPTER 4

SURVEILLANCE AND TARGET ACQUISITION PLAN

1. **General**. A comprehensive network of observation posts is deployed over the full width and depth of the battle group area. It is effective in all light and weather conditions and has reliable communications. The passage of timely and accurate information from observation posts to battle group headquarters permits the battle group commander to respond to situations as they are developing. Observation posts contribute to economy of effort by watching ground not observed by battle group sub-units. Against an enemy moving on foot at night, observation posts, patrols, and various unattended surveillance devices provide surveillance. Against a mechanized enemy long-range surveillance devices and weapon sights are used.

2. **Surveillance Troops**. The troops available to the battle group commander are the reconnaissance troop/platoon, forward observation officers (FOOs) and fire controllers (FCs). These are never sufficient for the job and are augmented by giving specific secondary surveillance tasks to all elements of the battle group, including the reserve, headquarters and echelons. Troops not under command but located within the battle group area are also used whenever possible, but special communication arrangements may be necessary. Finally, reconnaissance and standing patrols are used to cover the remaining gaps and provide early warning. The battle group surveillance and target acquisition plan incorporates the resources of formation and neighbouring units. The deployment of a formation screen or guard does not absolve the battle group from responsibility for its own security.

3. **Planning**. The formation surveillance and target acquisition plan provides:

   a. areas of responsibility;

   b. surveillance and target acquisition tasks, including remotely piloted vehicles;

   c. resources and any restrictions imposed on their employment;

   d. counter-surveillance measures including -

      (1) type of equipment and fire control,

      (2) the area in which restrictions are imposed,

      (3) measures to be applied,

      (4) circumstances for lifting, breaking or changing control measures, and

      (5) arrangements for delegating authority to lift or change control measures;

e. co-ordination across boundaries; and

f. co-ordination with deception plans.

These are incorporated into tactical plans arid orders within the battle group.

4. Battle group plans also take into account the formation counter-surveillance measures such as:

a. deployment and areas of responsibility;

b. use of resources by day and night and in conditions of reduced visibility;

c. orders to account for changes in conditions of visibility;

d. methods of communication; and

e. illumination policies for target acquisition and engagement.

5. The battle group surveillance plan is augmented by illumination as detailed in the formation surveillance and target acquisition plan. An illumination programme may be limited because guns and mortars are not available or ammunition is scarce. This means that some sub-units must be prepared to fight without artillery and mortar illumination.

6. Illumination planning commences at sub-unit level with the light mortar and hand-held flares, trip flares, fires and tank searchlights. Searchlights have only limited value and many serious disadvantages. They are regarded as a last resort and their use is kept simple.

7. Having prepared their own illumination plan, sub-units then consider their requirements for artillery and mortar illumination of tank killing zones and the most dangerous enemy approaches within their boundaries. These requests are considered by battle group headquarters:

a. to eliminate duplication and mutual interference between squadrons and companies;

b. to include further battle group tasks covering gaps and enemy approaches in depth; and

c. to allocate weapons to tasks.

8. Because mortars are organic to the unit and quicker to respond, they provide the framework of the illumination plan in infantry battle groups with artillery illumination being superimposed or given lower priority tasks.

9. **Co-ordination**. The surveillance and target acquisition plan is coordinated with other supporting plans, adjacent units and formation headquarters and is completed by the reconnaissance platoon/troop commander.

10. **Command and Control**. The command and control system is simple and flexible so that the battle group can react quickly and effectively to the inevitable surprises and confusion of the night battle. Authority to implement the illumination programme may be:

a. retained by the battle group commander until a major attack has been identified; or

b. delegated to sub-unit commanders at an early stage, possibly even before the first contact.

11. At whatever level command is exercised the commander has communications with both surveillance sources and fire units and he also monitors the consumption of illuminating ammunition through his fire support coordination centre. Having established the surveillance, illumination and fire plans, detailed co-ordination and preparation are necessary by the sub-units to integrate all three.

APPENDIX 5, ANNEX A, CHAPTER 4

COUNTERMOVES PLAN

COUNTERMOVES PLAN

1. **General**. The countermoves plan consists of plans for reinforcing, blocking and counter-attacking. When a battle position is penetrated by the enemy the commander orders his reserve to reinforce, block or counterattack to contain the enemy. The choice depends on the situation at the time.

2. **Reinforcing**. Battle group commanders reinforce sub-units by deploying tanks, tank destroyers, LRAAWs and MRAAWs from the battle group reserve or depth elements to augment the sub-unit in the battle position.

3. **Blocking**. The enemy is blocked by moving forces, usually infantry, from less threatened areas into secondary positions to contain the enemy.

4. **Counter-attacking**. The battle group reserve counter-attacks to seize lost ground or to destroy the enemy. Counter-attacks are either hasty or deliberate:

   a. **Hasty Counter-Attack**. It is launched, on short notice and before the tactical situation has stabilized, to recapture lost ground. A hasty COUnter-attack may be conducted by a sub-unit within its defended locality. Under favourable circumstances, a counter-attack on an exposed enemy flank may be successful by even a relatively small force.

   b. **Deliberate Counter-Attack**. It is planned in detail and conducted by the battle group reserve to destroy the enemy once he has been contained or to recapture a position that has been lost. Should the enemy prove too strong the battle group counter-attack force may be redeployed to reinforce or to block.

5. **Planning**. The battle group commander prepares the countermoves plan to defend his area. The ability to carry out a counter-attack depends on the resources allocated to his battle group. He must be fully aware of the formation commanders intentions to block or counter-attack in his area. The detailed planning of a countermove is completed by the sub-unit commander tasked with its execution. The commander of the battle group reserve completes the detailed planning and (coordination for all countermoves tasks assigned to him. Countermoves planning includes:

   a. selection and reconnaissance of routes, attack positions, defended localities, blocking positions and fire positions;

   b. requirements for route improvements or maintenance including negotiation of obstacles;

   c. requirements for fire support and air defence;

d. requirements for surveillance of intended countermoves task areas;

e. command and control measures; and

f. rehearsals by day and by night.

Battle group headquarters must know the response times by day and by night for each countermoves task to ensure that notices to move are reduced and deployment orders are given in good time.

APPENDIX 6, ANNEX A, CHAPTER 4

AIR DEFENCE PLAN

AIR DEFENCE PLAN

1. The divisional air defence plan and allocation of air defence resources are made by formation headquarters. Battle groups operate under the medium and high level air defence umbrella and may be provided with short range air defence systems in support if necessary. The commander of air defence elements attached to a battle group is the battle group commander's air defence adviser and is responsible for the co-ordination of active air defence within the battle group's area of responsibility. He receives early warning of air attack from his own and adjacent air defence units and from formation headquarters. Usually guns are employed to protect the tanks in the battle group; area air defence missiles give blanket protection of the area; and close air defence weapons protect point targets such as bridges. Air defence is an all arms responsibility and as such the battle group commander develops an all arms air defence plan. The following points are included in the plan:

   a. air defence sentries posted,

   b. warning systems and signals in place,

   c. air defence warning disseminated, and

   d. rules of engagement are clearly understood.

Many parts of the all arms air defence plan are contained in unit SOPs.

2. The battle group commander also considers the following passive air defence measures:

   a. siting;

   b. dispersion;

   c. camouflage and concealment;

   d. track discipline;

   e. field fortifications;

   f. deception; and

   g. warning.

APPENDIX 7, ANNEX A, CHAPTER 4

ELECTRONIC WARFARE (EW) PLAN

APPENDIX 7, ANNEX A, CHAPTER 4

ELECTRONIC WARFARE (EW) PLAN

1. The EW plan is prepared and controlled by formation headquarters. Battle groups have little latitude in modifying the plan because of the need for continuity across the formation front. Battle groups adhere to the plan once it is formulated, but information that they provide during the preparation phase serves both the battle group and formation headquarters staff. Battle groups operating near the FEBA can expect to have EW detachments in their area.

APPENDIX 8, ANNEX A, CHAPTER 4

SECURITY PLAN

APPENDIX 8, ANNEX A, CHAPTER 4

SECURITY PLAN

1. Security is part of the commander's defence plan. Sub-units and others in location are responsible for the security of their own areas. Administrative elements also provide for their own security. The surveillance and target acquisition plan and deployment, covering the width and depth of the battle group area, provides warning of enemy incursions. All sub-units must be prepared to take action against infiltration, patrols, airborne and airmobile threats and flank penetrations.

APPENDIX 9, ANNEX A, CHAPTER 4

ADMINISTRATIVE PLAN

APPENDIX 9, ANNEX A, CHAPTER 4

ADMINISTRATIVE PLAN

1. The administrative plan is prepared and controlled by formation headquarters. The battle group commander makes his own administrative estimate to optimize the use of his own resources and to seek additional ones if required.

2. He may request or suggest dumping and the location of dumps for anti-armour, tank ammunition and defence stores. If he expects heavy casualties, he may be assigned extra evacuation assistance.

3. The following administrative considerations are important in defensive operations:

   a. grouping;

   b. command and control of the administrative echelons;

   c. forecast of replenishment requirements;

   d. methods of replenishment;

   e. roads, and mobility;

   f. forecast of dumping requirement;

   g. maintenance/recovery requirements;

   h. forecast of casualty rate;

   j. prisoners of war;

   k. decontamination; and

   m. reserves.

DEFENCE IN CONDITIONS OF REDUCED VISIBILITY

DEFENCE IN CONDITIONS OF REDUCED VISIBILITY

GENERAL

1. Reduced visibility can be caused by darkness, fog, precipitation, dust or smoke. Although the time of sunrise and sunset is known, changes in visibility due to weather or the unexpected use of smoke cannot usually be predicted. Battle group commanders consider the effects of reduced visibility when preparing their defensive plans.

NATURE

2. Fighting at night or in conditions of poor visibility means:

a. changes in the enemy threat and tactics;

b. increased time needed for movement and countermoves;

c. reduction of effective surveillance ranges;

d. reduction of effective weapon ranges;

e. limitations to identification of friend or foe;

f. possible early occupation of battle position particularly those on vital ground;

g. adding or redeploying surveillance equipment to cover obstacles, gaps or key terrain;

h. deploying patrols, listening posts and observation posts to augment surveillance; and

j. manning and deploying weapons that have superior surveillance capabilities.

PLANNING

3. Reduced visibility planning forms a major part of the surveillance and target acquisition plan and may affect the defensive plan and deployment. Battle group commanders pay particular attention to limitations and reduced visibility planning factors.

4. **Limitations**. Reduced visibility imposes limitations on direct fire weapons to engage enemy tanks. Other limitations include:

a. **Covering the Front**. It may not be possible to cover all areas of engagement effectively from positions occupied on the flanks. Positions will have to be adjusted and patrols sent out to identify and locate the enemy. The surveillance plan may also need adjustment to cover gaps created by reduced visibility.

b. **Range of Engagement**. Anti-armour weapons ranges may be reduced allowing enemy tanks to penetrate.

c. **Tank Hunting Threat**. Enemy infantry may be able to close to rocket launcher range, especially in wooded areas and close country.

d. **Movement**. Movement of our reserves in conditions of reduced visibility takes longer. Knowledge of the ground, briefing and careful reconnaissance minimize this problem. Movement of vehicles and men in defensive positions is reduced to the minimum, and patrol routes and times in and out must be known by everyone.

e. **Changes of Visibility**. If the mist lifts suddenly, troops who have adjusted their positions to cover the front, risk being caught in the open. Movement back to primary positions must be planned and routes reconnoitred.

5. **Reduced Visibility Planning Factors**. Consideration of the effects of reduced visibility are made when preparing the surveillance and target acquisition plan. A major move is neither desirable nor possible. Some adjustments of positions within the battle group and sub-units are necessary. In planning these, commanders consider the following factors:

a. **Ground**. The main effort is still concentrated on the vital ground, and key terrain continues to be controlled in accordance with the operational plan.

b. **Depth**. Depth in the main position is important to contain enemy who break through or bypass forward elements. This means earmarking an additional reserve, anti-armour detachments and tank hunting teams to operate in depth.

c. **Early Warning**. Early warning of the enemy strength and his routes is vital. Once found he is shadowed. Standing patrols assist close reconnaissance elements. Early warning of reserves held for countermoves is particularly important, because they take longer to move into position.

d. **Obstacles**. Obstacles cause considerable confusion because the enemy have difficulty in determining their extent. It is important that obstacles are covered by fire in conditions of reduced visibility. SRAAWs deployed in and behind obstacles have an ideal opportunity to defeat halted enemy tanks.

e. **Reserves**. A reserve at every level, from sub-unit up is needed for reinforcing and hasty counter-attacks, and to influence the battle at critical times. Immediate reserves at brigade and below may have to move from position to position so they can react more swiftly if they are committed. Fighting in conditions of reduced visibility underlines the importance of being able to create additional reserves.

f. **Opening Fire**. Battle group and subunit orders for opening fire, with both anti-armour weapons and small arms, need to be adjusted in conditions of reduced visibility. Commanders balance the increased possibility of achieving surprise against missing opportunities to engage the enemy. Junior commanders have the best idea of when to open fire and authority to engage may be delegated to platoon/troop level.

g. **Protection of Tanks**. In conditions of reduced visibility the infantry's task of protecting tanks assumes greater importance. In particular infantry must prevent infiltration in wooded areas by enemy tank hunting teams.

6. **Conduct**. Success in the night battle depends on careful planning and co-ordination,and on simple control measures that can be adjusted to react to the unexpected. However successful the action, it is almost inevitable that the enemy will achieve some degree of penetration during the confusion of a night battle. Sub-units must be prepared to hold ground even if encircled, to mount hasty counter-attacks to restore the integrity of their defences, and to harass and canalize enemy infiltration until battle group commanders can deploy other subunits or a reserve to engage the enemy, and this may not be until first light.

7. Fighting at night one seeks to strike the right balance between exploiting surprise or maintaining security. It is clearly desirable to avoid compromising defences until the enemy can be surprised by the shock effect of a heavy weight of fire delivered unexpectedly. If, however, fire is withheld too long, there is a danger that the defences will be overrun.

8. **Passive Phase**. The night battle begins with a passive phase intended to retain surprise for as long as possible. The decision to open fire is delegated to sub-unit commanders once an attack is imminent. As the enemy approaches, sub-unit commanders depend initially on information from formation and battle group controlled surveillance sources. The quick, accurate passage of all available information down to the sub-unit level is essential to permit a timely decision on:

a. The question of when and where to deploy forces held in hides may be necessary before the sub-unit's own surveillance sources make contact.

b. The threat posed by the enemy force may be sufficient to justify passing to the fully active phase thus forfeiting surprise.

9. If sub-unit commanders assess that the threat is insufficient to justify full-scale engagement, they may authorize selective illumination and engagement within the overall framework of the passive phase. This could include one or more of the following measures:

a. controlled engagements by FOOs and FCs;

b. controlled engagements by designated LRAAWs using thermal imagery (TI) sights, and

c. controlled engagements by tanks or tank destroyers from sniping positions using

TI sights or white light.

If information on enemy movement is uncertain, it may be necessary for sub-unit commanders to call for limited, indirect illumination to clarify the situation.

10. **Active Phase**. When commanders judge that an enemy force, too large to be defeated by selective engagement, is approaching their position, they should call for indirect illumination targets and order the active phase. A careful assessment of the enemy rate of advance and the reaction time for illumination is necessary to get the timing right. Once illumination is effective, all weapons engage as soon as they acquire targets. While the illumination policy is strictly controlled, in extreme cases, sub-unit commanders must be capable of illuminating their killing zones. Their ability to do so depends on the ingenuity and effort devoted to prepare local illumination sources during the preparatory phase.

ANNEX C, CHAPTER 4

DEFENCE OF BUILT-UP AREAS (FIBUA)

DEFENCE OF BUILT-UP AREAS (FIBUA)

GENERAL

1. The defence of a built-up area is fought in three dimensions: on the surface at street level, above the surface in buildings and on roof-tops, and below the surface in sewers and subways. The determined defence of a built-up area can delay a stronger enemy for long periods and force him to use large numbers of troops. The fundamentals of defending a built-up area are generally the same as those discussed in section two; however, because control is decentralized to a greater degree a number of aspects are highlighted. (See the manual, Fighting in Built-Up Areas, for more information.)

CHARACTERISTICS

2. FIBUA is noteable for:

   a. limited observation and fields of fire;

   b. restricted mobility; and

   c. close combat.

PLANNING

3. The defence of a built-up area are involves:

   a. Mutually supporting positions located on the perimeter consist of tanks and anti-armour weapons. Reconnaissance elements and surveillance devices cover gaps between positions.

   b. Mutually supporting strong points in depth are grouped in a series of defended localities with local reserves for hasty counter-attacks. A series of fighting positions are prepared so that troops can withdraw from their present positions once they become untenable.

   c. A reserve is kept ready.

2. Figure 4C-1 provides a diagrammatic illustration of a battle group defence of a built-up area.

3. Particular attention is paid to the following points:

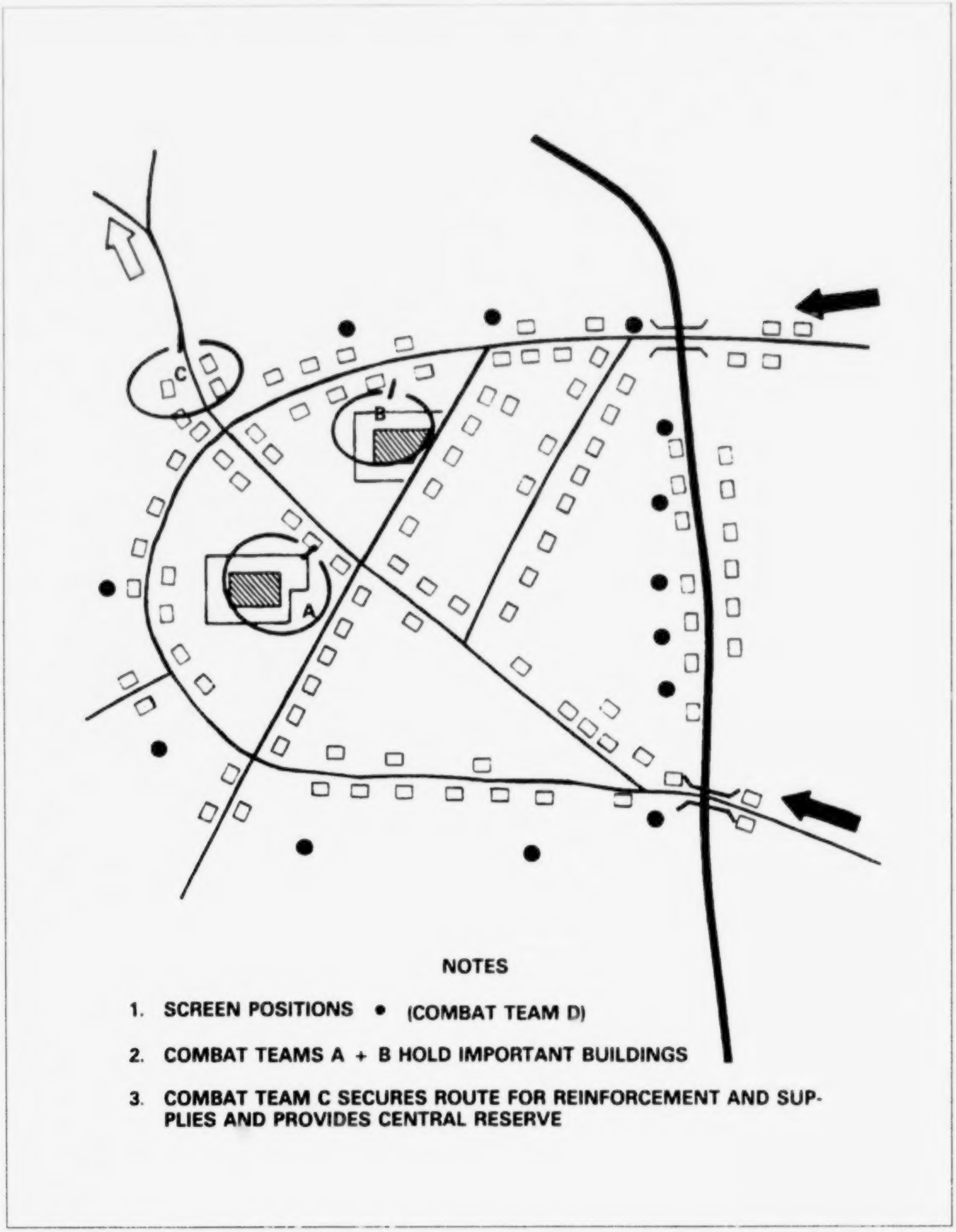
   a. **Defence of the Perimeter**. This consists of -

(1) artillery observation posts and FCs sited to cover likely enemy approaches;

(2) obstacles on approaches (mines, rubble, ditches, wire, etc);

(3) tanks and anti-armour weapons deployed in pairs in defilade positions to provide mutual support; and

(4) a plan for withdrawing tanks and anti-armour weapons at the appropriate time to form a mobile reserve and prepare anti-tank traps in the rear area.



NOTES

1. SCREEN POSITIONS ● (COMBAT TEAM D)
2. COMBAT TEAMS A + B HOLD IMPORTANT BUILDINGS
3. COMBAT TEAM C SECURES ROUTE FOR REINFORCEMENT AND SUPPLIES AND PROVIDES CENTRAL RESERVE

Figure 4C-1 Battle group Defence of a Built-Up Area

b. **Strong Points and Defended Localities**. Consider the following -

1) To avoid confusion between areas of responsibility, boundaries between defended localities should not be determined by roads, but rather arranged so that the likely enemy lines of approach fall solely into the area of responsibility of one defended locality or another.

(2) Patrols and snipers harass the enemy throughout the defended area and attempt to infiltrate back into areas that have been cleared by the enemy.

(3) Defended localities consisting of two or three strong points are sited to block enemy penetrations. Engineers and assault pioneers prepare strong points, clear fields of fire and construct obstacles.

(4) Local reserves are maintained by all defended localities.

(5) Penetration of a strong point by the enemy is counter-attacked immediately before the enemy becomes established. Once the enemy has established a strong point it may be wiser to re-adjust our position rather than risking a counter-attack.

c. **Mobile Reserves**. The mobile reserve at battle group level usually consists of one sub-unit. It exploits the defenders advantage of local knowledge of the area. The primary tasks of the reserve are -

(1) reinforcing defended localities,

(2) blocking, by destroying enemy penetrations between defended localities, and

(3) counter-attacking to regain defended localities that have been lost.

d. **Communications**. Defence of built-up areas requires special attention to communications. Although the primary means is line, this may be disrupted by artillery fire and the movement of friendly troops. The employment of HF and UHF radios and helicopter radio rebroadcast may have to be considered. Runners, although slow and not an all informed means, must also be considered.

e. **Administration**. The restricted mobility and close combat that characterizes FIBUA demands innovative administrative planning. Defended localities must be administratively self-sufficient for prolonged periods. This is achieved by the stocking of large quantities of combat supplies.

ANNEX D, CHAPTER 4

DEFENCE IN FORESTS

DEFENCE IN FORESTS

GENERAL

1. Although Soviet doctrine is to avoid forested areas so not to reduce the rate of advance, some operations in forests are inevitable. Infantry units are well suited to defend large forests; however, battle groups may be formed to defend forests that are not obstacles to armour. Depending on the size and spacing of trees and the road and track network, armour may be able to force their way through forests.

CHARACTERISTICS

2. Fighting in forests is high-lighted by:

   a. reduced visibility and fields of fire;

   b. close combat;

   c. restricted mobility;

   d. difficulty in achieving mutual support between defended localities; and

   e. improved protection from observation and fire.

PLANNING

3. **General**. Battle group commanders may be tasked to deny access or to hold a particular area of the forest that is important to the formation commander's plan. In planning the battle group commander pays particular attention to the following aspects: grounds, observation, reserve, size, obstacles and command and control.

4. **Ground**. Mutual support within the battle group by combat teams is normally impossible. The defence concentrates on the most likely enemy line of advance and covers the remainder of the area by patrols while maintaining a reserve. Defence features are:

   a. It should be based on strong sub-unit blocking positions, sited for all round defence. These positions may be sited at track junctions, natural obstacles on the enemy's likely approaches, high ground or open spaces.

   b. Alternate positions are planned, reconnoitred and, if possible, prepared.

   c. There is little or no mutual support between sub-unit blocking positions except, possibly, by using lateral fields of fire into tracks and trails. The intervening area must be covered by patrols, listening posts and surveillance devices.

d. The choice of occupying the forward edge of the forest with tanks and anti-armour weapons to destroy the enemy as he approaches, must be weighed against the risk of the early destruction of these elements by enemy indirect and direct fire weapons. Reduced visibility may result in the need for indirect fire to be controlled at platoon and section level.

5. **Observation**. To ensure early warning of enemy attempts to infiltrate or bypass, patrols are deployed by day and by night. Ideally, these patrols remain in position for extended periods, to reduce the chance of their detection by enemy reconnaissance elements.

6. **Reserve**. A reserve position is centred on a network of tracks and trails to allow rapid deployment during countermoves. Infiltration tactics are considered if the reserve deploys to areas unsuited to armour.

7. **Size**. The size of defended localities is reduced because observation ranges are reduced and fields of fire are obstructed.

8. **Obstacles**. Maximum use is made of engineers and assault pioneers to deny routes and to develop ambush positions.

9. **Command and Control**. Control cannot be exercised centrally; it depends on the initiative of subordinate commanders.

CHAPTER 5

PASSAGE OF LINES

CHAPTER 5

PASSAGE OF LINES

501. GENERAL

1. A passage of lines is the movement of a unit through another unit either to come into (forward passage) or out of (rearward passage) contact with the enemy. In this manual the units are identified as the moving battle group and the in-place battle group.

2. The movement of a battle group through a depth battle group or through a forward battle group is common during mobile operations. The movement is more complicated when the in-place battle group is in a prepared defensive position within a developed barrier plan. Examples are the withdrawal of the covering force through the main defensive area or the launching of a deliberate counter-attack.

3. During the passage of lines, parts of both battle groups are temporarily concentrated in the area normally occupied by one battle group, making both vulnerable to air and artillery attack. There is potential for confusion and loss of control in this situation.

4. The key question in the passage of lines is who commands the two groups if the enemy attacks during the operation? This will be considered in subsequent sections of this chapter.

502. CONTROL AND CO-ORDINATION CONSIDERATIONS

1. The success of a passage of lines depends on establishing the correct control measures and effective co-ordination between the commanders concerned. The following points should be considered in the planning process:

   a. exchange of plans/information -

      (1) tactical situation,

      (2) action on contact,

      (3) intelligence,

      (4) obstacles,

      (5) deception, and

      (6) disposition;

   b. movement -

      (1) selection of routes and waiting areas,

    (2) location and routes through obstacles,
    (3) priority for use of routes and waiting areas,
    (4) provision of guides and traffic control,
    (5) timings for movement, and
    (6) contact points;

c. tactical support -

    (1) type and location,
    (2) timings,
    (3) control, and
    (4) attack positions and lines of departure for a forward passage;

d. administrative support -

    (1) medical,
    2) combat supplies,
    (3) vehicle recovery,
    (4) military police,
    (5) prisoners of war,
    (6) sharing administrative areas,
    (7) location of echelon and support units, and
    (8) civilian and straggler control; and

e. command and control -

    (1) time or circumstance of change of command,
    (2) communications including CEO's and call signs,
    (3) recognition signals and passwords,

(4) provision of liaison officers and interpreters, if necessary, and

(5) reconnaissance arrangements.

2. If the movement is a forward passage of lines, the moving battle group commander has his sub-unit commanders and their troop/platoon commanders reconnoitre the routes for passage. In the rearward passage, the seconds-in-command reconnoitre the routes.

503. FORWARD PASSAGE OF LINES

1. In the advance or attack, a battle group deploys through another battle group in contact with the enemy, or as a reserve battle group it passes through a committed battle group, to continue with the next phase of an attack. In both cases, the plan and the co-ordination prevent confusion and delay, especially during conditions of reduced visibility.

2. The main features of the plan include the following:

a. **Selection of Routes**. If possible the moving battle group moves through areas not occupied by the in-place battle group or through areas on its flanks. This reduces congestion in the forward areas and avoids drawing enemy fire. Assembly areas are not used in the forward areas.

b. **Attack Positions**. Attack positions are sited so they can be easily protected by the in-place battle group the in-place battle group, but moves directly to the line of departure.

c. **Movement**. The moving battle group has priority on the routes to, and within the area of responsibility of the in-place battle group. The movement plan is known by the in-place battle group and its sub-units. Guides, route marking, attack positions and line of departure and traffic control are the responsibility of the in-place battle group. The moving battle group may assist with these tasks.

d. **Transfer of Command**. The time or conditions when the forward area becomes the responsibility of the moving battle group commander must be clearly established by the two commanders. This may be at or just prior to H-hour or when the preliminary supporting fire commences. The formation commander may also establish this time. This means that patrols or outposts deployed by the in-place battle group, forward of its main position, come under the command of the moving battle group until they are relieved or withdrawn.

e. **Tactical Support**. The in-place battle group may: launch supportive attacks, provide direct and indirect fire, operate observation equipment, breach wire and minefields, provide guides and secure the LD.

504. REARWARD PASSAGE OF LINES

1. This movement happens after a battle group has completed a covering force task or during a withdrawal. While it is similar to a forward passage of lines, it is more difficult for the following reasons:

   a. the desire for speed and lack of sufficient troops make detailed reconnaissance and liaison difficult;

   b. the moving battle group may have suffered vehicle and personnel casualties; and

   c. the moving battle group may be in close contact with the enemy.

2. The main features of the rearward passage are:

   a. **Fire Support**. The in-place battle group provides all possible fire support for the moving battle group. Arrangements for the control of this fire must be made.

   b. **Passage through Obstacles**. The in-place battle group identifies all routes through obstacles to the liaison teams and provides guides and traffic control for the moving battle group. A minimum of two routes per battle group are planned.

   c. **Transfer of Command**. Co-ordination of control measures is arranged so that the in-place unit assumes command at the mutually agreed time or when the moving battle group is clear of a mutually agreed handover line.

   d. **Traffic Control**. To reduce troop density and congestion, multiple routes are considered. Traffic control is provided by the in-place battle group and the moving battle group is given priority use of routes. The commander of the moving battle group advises the in-place group commander when his unit has cleared the position.

   e. **Rendezvous or Assembly Area**. The use of these areas to collect sub-units should be avoided. However, if they are used, they should be far enough to the rear of the in-place battle group to avoid interfering with its tactical or administrative activities.

   f. **Handover Line**. The superior commander designates a handover line to indicate where the commander of the in-place force assumes command. This line has the following characteristics -

      (1) be forward of the group where the enemy can first engage the main defensive position with observed fire;

      (2) be situated so that crossings and defiles used by the moving force can be protected;

(3) be in a defensible area to prevent a running battle;

(4) be easily recognizable on the ground;

(5) the area behind the handover line should contain good lateral routes to permit the use of alternate entry points; and

(6) include strong points to deceive the enemy that it is the FEBA.

(505 to 599: Not allocated)

CHAPTER 6

RELIEF

CHAPTER 6

RELIEF

SECTION 1

INTRODUCTION

601. GENERAL

1. Relief of a battle group may be achieved by conducting a passage of lines or a relief in place. In mobile operations battle groups are frequently relieved using forward or rearward passages of lines rather than relief in place, because of the fluidity of the situation, intermingling of forces and security required. The two forces are referred to as the moving force and the in-place force. The passage of lines is discussed in Chapter 5.

2. The relief is conducted when a force is:

   a. successful in accomplishing its mission;

   b. required for operations elsewhere or is being redeployed to a more favourable position;

   c. being replaced to avoid exhaustion;

   d. unable to continue with its task, eg, disengagement prior to the employment of nuclear weapons; or

   e. not suitable to undertake a new task.

3. The most likely methods of relief are:

   a. Establish a guard forward of the in-place unit unimpeded. If enemy activity permits, this is the simplest form of relief (forward passage of lines).

   b. Establish the moving battle group in defence behind the in-place battle group which then withdraws. While this affords good security for the moving battle group it may create an asymmetrical FEBA; the ground may not be suitable, or the ground may be given up unnecessarily (rearward passage of lines).

602. RELIEF IN PLACE

1. A relief in place happens when all or part of the in-place force is replaced in position by the moving force. The force in-place is relieved under the following conditions:

a. in or out of contact;

b. deliberately as a planned operation or hastily due to the urgency of the situation;

c. by equal or unequal forces; and

d. by day, night or in conditions of reduced visibility.

2. The sequence of activities remain the same as in a passage of lines, but time available for planning, preparation and conduct may vary. A hasty relief requires a rapid response and may commence as a reinforcement activity. The possibility of confusion is inherent in the relief as two forces with parallel command structures are operating in one area at the same time. The aim is to pass the responsibility for the area from one force to the other without weakening the defence. This chapter describes the deliberate relief in place of a battle group in contact.

603. PRINCIPLES

1. The following principles of war apply:

a. **Surprise**. The elements of surprise are secrecy, concealment and deception. Secrecy is achieved by continuing all normal routine. Concealment is achieved by conducting the relief during conditions of reduced visibility. Deception is achieved by increasing activity in another area to divert the enemy's attention.

b. **Security**. Security measures include: restricting the size and movement of advance parties, minimizing vehicle movement and restricting the use of radio. Defence arrangements including patrols and sentries are maintained. A reserve is maintained.

c. **Co-operation**. Co-operation at all levels between the in-place battle group and the relieving battle group is critical. Commanders co-ordinate the detailed sequence of relief: arrangements for briefings, handover of intelligence, orders, plans, defence stores, combat supplies and possibly equipment.

SECTION 2

PLANNING

604. FORMATION COMMANDER'S DIRECTION

1. The formation commander orders the relief in place and provides the following direction:

   a. time when the relief is to be completed and any other critical timings;

   b. report lines, routes and assembly areas;

   c. arrangements for reconnaissance, liaison, movement of advance parties, traffic control and signals, including emission control;

   d. arrangements for deception including artillery fire, movements in other areas and electronic emissions;

   e. restrictions on movement;

   f. possibly, the time or circumstances when command is transferred from the in-place battle group commander to the moving battle group commander; and

   g. policy for handover of combat supplies and equipment.

2. **Battle Procedure**. It differs from the occupation of a normal defensive position, because the defensive plan is made and it is the mechanics of the relief that are involved. Since the defences are likely to be under enemy observation, covert movement and reconnaissance during all stages of battle procedure are particularly important.

3. **Initial Briefing and Reconnaissance**. Once the warning order is received, the moving battle group commander goes forward with his orders group to the RV with the in-place battle group for briefings. Both groups must be available for sub-unit briefings and reconnaissance. The orders group then disperses to reconnoitre their individual defensive tasks, preferably accompanied by their respective in-place commanders. Detailed information is obtained from the in-place unit about enemy dispositions and activities and friendly dispositions and plans.

4. **Planning and Orders**. The two battle group commanders agree on the general outline for the relief and the moving battle group commander begins his detailed reconnaissance and planning. The orders group is reassembled to receive orders for the relief in place and to co-ordinate the plans for defence. Meanwhile, platoon/crew commanders exchange information to ensure total familiarity with the ground, routes and defensive tasks.

605. PREPARATION AND PLANNING

1. Moving and in-place battle group commanders jointly prepare detailed plans. However, the planning initiative and the primary responsibility for the associated staff work lies with the moving battle group to free the in-place battle group to concentrate on the current battle.

2. Formation orders normally specify whether the relief is to be by day or by night. In most circumstances, a night relief is preferred because of the greater chance of achieving surprise, despite the difficulties of control. However, other factors such as the ability of the in-place battle group to hold its position may dictate a daytime relief.

3. During their planning, the moving and in-place battle group commanders weigh the advantages and disadvantages of conducting the relief as quickly as possible. If it is done quickly, considerable noise is likely to result. Although it can be masked, it will almost inevitably be detected at some stage. Surprise in this case depends on speed, completing the operation force before the enemy can react. The initial occupation is by infantry on foot with mechanized forces moving in once the position is securely held.

4. The moving battle group adopts the grouping, disposition and supporting plans of the in-place battle group. This simplifies and speeds up both the reconnaissance and the execution of the relief. Adjustments to grouping or siting is done after the relief is completed.

5. **Planning Factors**. Within the formation commander's direction detailed planning includes security, timings, sequence, and the allocation of routes and areas.

6. **Security and Deception**. This includes continuing normal activity such as patrols, operation of surveillance devices, radio transmissions and echelon movement. For a night relief the relieving battle group assumes responsibility for the operation of posts and patrols before last light the previous day or alternatively the in-place battle group leaves its observation posts and patrols in position until the next day. The relieving unit moves under radio silence. Noise and light discipline are strictly enforced. Artillery fire and deliberate vehicle noise may be used to cover any noise caused by the relief. These activities may be intensified during the nights before the relief to cause additional deception. All deception measures coordinated with formation headquarters.

7. **Timings**. Plans are made for the exchange of command at all levels. Normally the moving troop/platoon commanders assume command when all their tanks/sections are relieved, while the moving sub-unit or battle group commanders assume command as soon as more than half of their subordinate elements have completed the relief. The time when this occurs is mutually agreed to by the two commanders. Other critical timings are related to tasks and resources, and those factors which affect sequencing.

8. **Sequence**. A relief in place is conducted in distinct phases to ensure the most effective defence during the operation. Whether the depth sub-units are relieved first followed by the forward sub-units or the reverse depends on time available and anticipated enemy action. While the simultaneous relief of all elements of the battle group may be desirable, such a procedure may

result in an unacceptable number of troops/vehicles in the area. Other considerations include:

a. **Fire Support**. When the direct support battery is changing, relieving FOOs take over in daylight or the in-place FOOs remain in position until first light. Fire controllers are relieved in a similar manner. The moving battle group uses the fire plan of the unit in place. The relieving mortar platoon takes over the base plates of the in-place unit. The in-place unit provides the fire support during the relief. The moving unit occupies fire positions to the rear of the in-place unit. All fire support during the relief is controlled by the battle group that has command of the area at the time the fire is requested.

b. **Exchange of Equipment and Supplies**. The relief may be simplified, the noise reduced and the moving unit made effective more quickly by handing over some items of equipment in position. Normally mortar base plates, defence stores and field telephones are handed over. In addition other items that may be either handed over or exchanged include -

   (1) combat supplies, particularly those that have been dumped,

   (2) surveillance devices,

   (3) GPMG (SF) tripods, and

   (4) any other equipment that is difficult to move.

9. Movement planning includes the following aspects:

a. separate routes for moving and in-place units;

b. separate routes for vehicles and walking troops;

c. route marking and traffic control which are normally the responsibility of the moving unit as far as subunit RVs and of the in-place unit from the RV forward;

d. co-ordination with formation headquarters of movement, traffic control and waiting areas from the rear area into the new position;

e. battle group and sub-unit waiting areas and routes within the in-place unit area;

f. debussing areas;

g. sub-unit and sub-sub-unit routes and RVs;

h. report lines;

j. orders of march; and

k. timings or movement control instructions.

SECTION 3

CONDUCT

606. GENERAL

1. The conduct of the relief varies depending on how quickly it is to be completed. If it is done quickly tanks and APCs move directly into position on routes that offer the best possible cover. Alternately, the infantry park their APCs as far to the rear as necessary, and march forward to avoid detection. Until the infantry relief is complete, tanks, support weapons and attached arms APCs remain in waiting areas. Once the infantry relief is complete, tanks, support weapons and others begin their relief.

2. The moving unit proceeds as follows (see Figure 6-1):

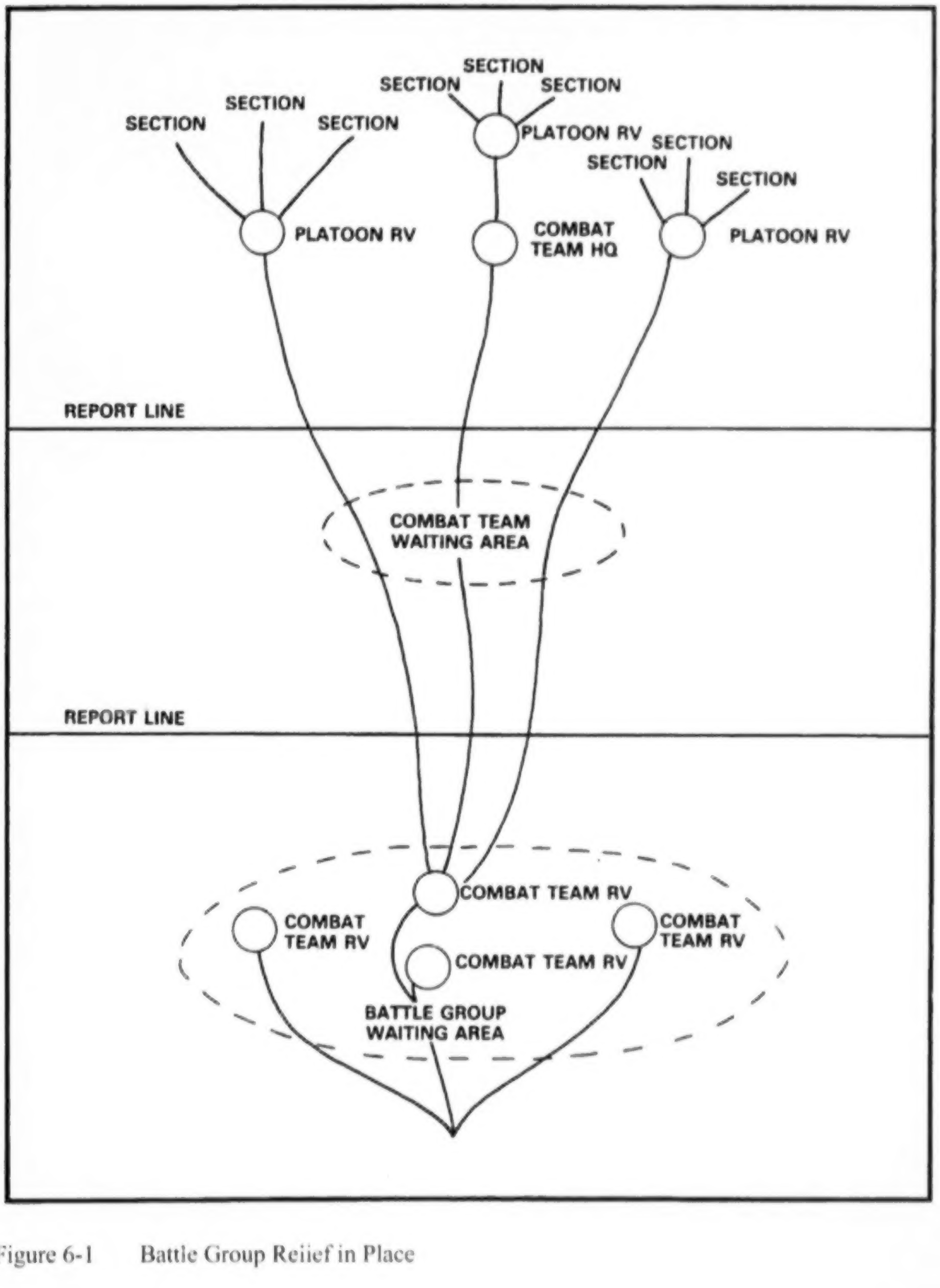
   a. It moves from the assembly area along one or more designated routes using waiting areas as necessary. The use of waiting areas is minimized to complete the operation as quickly as possible.

   b. At the release point sub-units proceed to RVs where they are met by advance parties. Waiting areas are used if the distances are long or if more than one sub-unit is using a route. The last waiting area may also be the sub-unit RV.

   c. The moving unit moves forward from sub-unit RVs using guides from the in-place unit to troop/platoon RVs from where they move into position.

   d. They debus in areas well to the rear, along sub-unit routes or in the in-place sub-unit hide or battle position.

3. The in-place battle group then withdraws on a separate route, as positions are handed over. The withdrawal is described in Section 4 of Chapter 4.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BATTLE GROUP WAITING AREA

Figure 6-1 Battle Group Relief in Place

607. COMMAND AND CONTROL

1. Throughout the relief the moving and in-place unit commanders are collocated. If the enemy attacks during the relief, one battle group commander assumes command of all troops in the area until the relief can continue. The moving battle group relies mainly on prearranged orders and guides for command and control as radio silence s in effect. Line belonging to the in-place unit is used to report changes of command and other important messages. Where necessary, traffic control is exercised using extensions to existing line communications.

(608 to 699: Not allocated)

CHAPTER 7

OPERATIONS IN A NBC ENVIRONMENT

CHAPTER 7

OPERATIONS IN A NBC ENVIRONMENT

SECTION 1

INTRODUCTION

701. GENERAL

1. The enemy is prepared to use any one or a combination of NBC weapons to achieve his objective. A battle group is prepared to fight where the hazards from conventional, nuclear, biological and chemical weapons occur separately or together.

2. The battle group commander is not deterred from his mission simply because of the threat of NBC. He and his staff plan in such a way that troops can change from conventional to NBC conditions without significant loss of combat effectiveness or major adjustment to the plan.

3. To meet this requirement, the battle group commander and staffs at all levels must be familiar with the characteristics, effects, and procedures given in Nuclear, Biological, and Chemical Defense Manuals. The degree to which defensive measures can be adopted are governed by the mission, terrain, weather, enemy, time and space and the capacity of our own troops.

4. A positive state of mind is an important prerequisite for defence against the effects of NBC weapons. This is fostered by strong leadership at all levels, and realistic training to build confidence in soldiers and in their equipment.

702. THREAT

1. The WP forces are well trained and equipped to operate in a NBC environment. NBC organizations are included from front to regiment, while NBC delivery systems are available in formations from front to division. Their doctrine stresses massive use of nuclear weapons along the entire breadth and depth of NATO formations. They will exploit strikes quickly with a combination of tank heavy forces attacking the front, and airborne while airmobile units assault into the rear areas.

2. Whereas WP artillery is limited to neutralizing forward defence lines to support an armoured breakthrough at selected points, the battle group may be attacked in depth and destroyed by use of low yield nuclear fire. This means that battle groups must be prepared to operate in an NBC environment regardless of their deployment.

3. **Nuclear Targets**. Main axes of advance are likely to receive the deepest and highest yield nuclear strikes, while strikes on secondary axes and flanks are supplemented by conventional fire or chemical/biological attacks. In particular, prime targets are:

a. nuclear weapons (including all artillery with a nuclear capability);

b. major air defence systems including airfields;

c. command and communications facilities;

d. port and logistic support facilities; and

e. concentrations of troops which have been identified and located within pre-planned areas or as opportunity targets.

4. **Biological Targets**. These take longer to be effective in a target area and are almost impossible to control once released. They are not seen as a threat to the battle group in the same way as nuclear and chemical weapons; however, deep and strategic targets as well as populations are vulnerable.

5. **Chemical Targets**. These are used with other weapons of mass destruction. The WP possesses a comprehensive chemical arsenal and effective protective clothing and decontamination equipment. In the forward combat zone, non-persistent agents can be expected and may be delivered in surprise attacks supporting main attacks against forward defences. Battle groups can expect to receive repeated non-persistent attacks. At the same time, persistent agents could be used in the rear combat and communications zones against airfields, ports, and targets such as brigade or divisional administrative areas (BAAs, DAAs) and possibly on flank units adjacent to the enemy main axis in the combat zone. When enemy forces are defending, they can be expected to use chemical agents against attacking battle groups, primarily to slow and canalize them.

703. COMMAND AND CONTROL

1. The effects of NBC weapons degrade and interrupt communications, thus posing a threat to command and control. Electromagnetic Pulse (EMP) can cause permanent damage to electronic equipment and steps must be taken to protect communication systems. In these circumstances, it is particularly important that a commander understands his task and the intentions of his superior commander completely. This enables him to continue operations without communications, at least for short periods.

2. The sudden confusing void created by the effects of NBC weapons requires quick reaction by a commander and his staff. Various expedients may be necessary, including the issue of fragmentary orders and SOPs to address the following questions:

a. When is the BCW Survival Rule initiated?

b. When do troops commence taking pyridostigmine bromide tablets every eight hours?

c. When and where do troops change protective clothing including mask canister if necessary?

d. How will the order be passed and what is the procedure?

e. When, where and under whose control will natural bodily functions be performed?

f. When, by whom and where will the detection tests be performed?

g. When, by whom and where will monitoring take place?

h. When, what, where and how will contaminated items be disposed?

j. When will operational decontamination be conducted and to what level?

k. Who decides where to place NBC sentries and when?

m. What alarms are used and where should they be located?

SECTION 2

APPROACH TO NBC DEFENCE

704. GENERAL

1. The battle group NBC plan has three main parts, hazard avoidance, protection (individual and collective) and decontamination.

2. **Hazard avoidance**. Total hazard avoidance is not possible to achieve; but some can be achieved by passive measures such as camouflage, concealment and dispersion. Other ways to avoid NBC effects are:

   a. contamination control;

   b. detection, identification and marking of contaminated areas;

   c. the issue of contamination warnings;

   d. re-location or re-routing to an uncontaminated area; and

   e. radiation exposure state updates.

3. **Protection (individual and collective)**. When troops are exposed to NBC hazards, they are equipped with appropriate protective equipment to minimize the effects of the weapons used. The battle group commander knows that individual protective equipment, including prophylactic and therapeutic drug treatments, are required for individual survival. Collective protection facilities are also required to ensure that key facilities and equipment are protected, that certain procedures can be accomplished (eg, surgical and life saving procedures) and that personnel can be given periodic rest while wearing full chemical warfare (CW) protective clothing.

4. **Decontamination**. The battle group commander evaluates the degree of decontamination needed for the battle group to perform its mission and reduce personnel casualties. When contamination does occur, it may be necessary to immediately decontaminate, partially or completely, personnel and equipment.

705. DECONTAMINATION OPERATIONS

1. The following guidelines govern decontamination operations:

   a. self-decontamination is done to the maximum extent possible;

   b. the individual is responsible for the immediate decontamination of his person, clothing, equipment and personal weapon;

c. the battle group commander is responsible to provide decontamination instructions to his troops; and

d. the brigade commander is responsible to order complete decontamination and to coordinate the complete decontamination of units out of contact in "clean areas".

2. Decontamination operations are classified as follows:

a. **Immediate Decontamination**. This is removing contamination from the body, clothing, equipment and weapon and, if appropriate, from the immediate area the individual is about to occupy. This decontamination is initiated by the individual after an attack using the resources immediately available to him.

b. **Operational Decontamination**. This is the removal or neutralization of contaminants from sub-unit equipment, crew served weapons, parts of vehicles such as hatches, doors, common use areas or critical areas that must be used by the troops to accomplish their mission. This decontamination is initiated by the battle group commander or ordered by the brigade commander and is performed using equipment and decontaminants available within the battle group. Additional resources could be requested from the brigade. The degree of operational decontamination achievable is dictated by the tactical situation.

c. **Complete Decontamination**. This is the removal or neutralization of contaminants so that no danger exists to unprotected troops. Complete decontamination applies to units out of contact in a "clean area". Complete decontamination is ordered by brigade or divisional commanders, coordinated by their headquarters and conducted by their combat service support elements. Establishing a decontamination center is the responsibility of G3 NBC staff officers from all formation headquarters involved. The battle group NBC officer is responsible to move sub-units to the decontamination center. Brigade and unit military police, and reconnaissance elements are used to direct traffic, mark routes and conduct NBC surveys and reconnaissance.

SECTION 3

CONCEPT OF OPERATIONS

706. OPTIONS OPEN TO THE BATTLE GROUP COMMANDER

1. The battle group commander has two options when his unit has been attacked:

   a. **Option 1 - Relocate**. If the commander decides that the mission can be accomplished more effectively from a new uncontaminated position, he recommends this to the brigade commander. Movement to an uncontaminated area does not begin before the end of fallout except that short moves to areas with non-life threatening contamination may take place. Any decontamination procedures necessary to avoid transferring contamination are done before occupying the new clean area.

   b. **Option 2 - Remain**. The manoeuvre of the battle group may be so critical to the brigade or division plan that the contaminated position cannot be avoided. Once the decision to stay has been reached, the battle group commander evaluates the degree of decontamination necessary to enable him to accomplish his mission. Decontamination efforts are extremely expensive in manpower, time and logistics, and once completed, it may be negated by continued NBC attacks.

2. The presence of toxic hazards on the battlefield requires decisions concerning mechanized and non mechanized movement. The risk of exposing protected troops by dismounting into contaminated areas may outweigh the risk of remaining in the vehicle. The commander may decide to dismount the infantry platoon to gain additional firepower. Ultimately, the battle group commander must consider the pattern of contamination, risk, and nature and duration of the operation when making such a decision. When infantry dismount into contaminated areas, this will have a significant impact, either immediately in slower response times for the manoeuver element, or later in the sustainment phase of the operation. Contamination inside vehicles will cause soldiers to remain in a "High" level of protection for longer periods.

707. IMPACT ON PERSONNEL

1. The aim in a NBC environment is to survive and defeat the enemy. Combat stress, heat build-up, hyperventilation, and sleep loss are the major factors that affect the soldier's performance during an extended operation. Wearing NBC protective equipment magnifies these and other related pressures and stresses. Individuals cannot wear all of their protective equipment all the time. Duty requirements, heat build-up, psychological stress and basic human needs, necessitate a variation in the level of protection to be ordered.

2. Just as a sustained chemical environment affects the positioning of sub-units and limits route availability, it also affects the use of reserves. The battle group commander must consider using the reserve to reinforce should a forward unit's effectiveness fall to a critical level. This

means that the battle group may be without a reserve for a time; or it may have to fight with a "dirty" reserve if time becomes critical. The duration of any operation is affected if the unit is forced to fight "dirty". The battle group staff must anticipate the time required to reconstitute viable reserves and restore general unit effectiveness.

SECTION 4

PLANNING

708. PLANNING

1. The battle group commander obtains information from higher headquarters on the NBC threat facing his unit. When the use of NBC weapons is imminent or, when they are used in his area (threat level "high"), a battle group commander evaluates the G2 estimate of the enemy's likely NBC targets and obtains advice from his NBC officer. Based on this he may adjust the layout of his unit and deploy his NBC automatic alarms and NBC sentries to be ready for NBC attacks. As well, he assesses the impact of a large number of casualties, extensive equipment damage and degree of decontamination achievable at different stages of his task.

2. The battle group commander, faced with significant toxic hazards, considers the effects of these hazards. As patterns of contamination are plotted, the resulting overlay shows him the concentration in his manoeuvre area. Where concentrations of toxic hazards are too high, he considers moving combat teams to alternate positions or selecting routes that offer less risk. The staff, in their estimates, identifies key terrain to the operation but which is or probably will be contaminated. It assesses the risk of occupation and accepting a degradation of performance against an alternate manoeuvre plan. The battle group commander then assesses the consequences.

3. After his assessment the battle group commander orders his sub-units to take NBC defensive measures. These measures ensure that:

   a. his troops and their equipment have protective cover; and

   b. troops are given early warning and are able to anticipate effects of the enemy's NBC attacks.

709. FACTORS TO BE CONSIDERED

1. The battle group commander considers the following factors when estimating the situation and preparing his plan:

   a. the NBC tactical situation at the moment;

   b. the mission;

   c. the impact of NBC casualties and equipment damage on the unit's ability to accomplish the mission;

   d. identification of the type, degree and persistency of the hazard;

   e. influence of weather and terrain on the NBC hazard;

f. the impact of prolonged chemical or biological hazards on unit morale and the restricted capability of troops while in partial or full NBC protection;

g. time required and available to react to the NBC hazard, including the estimated remaining protection time afforded by the NBC defence system;

h. effort necessary to eliminate or reduce the NBC contamination hazard;

j. impact of radiation level, including "go", "no-go" areas, time to cross or remain in areas within permissible radiation dosage levels;

k. radiation exposure level of unit;

m. the capability of the unit or availability of specialized NBC unit assistance for hazard reduction;

n. ability to avoid the hazard;

p. logistic support, including resupply of NBC items;

q. exploitation by the enemy using conventional forces immediately after NBC attacks; and

r. vulnerability to and probability of follow-on NBC attacks.

2. The following CW protective clothing limitations must be considered when conducting or planning operations in a chemical environment:

a. heat exhaustion may occur among troops doing heavy work or working in high temperatures and humidity;

b. breathing resistance, high body temperatures and psychological stress tend to cause excessive fatigue;

c. activities involving the use of the full senses, or related functions such as manual dexterity, visual acuity and voice communications, become more difficult;

d. essential needs such as eating, drinking, care for wounds and elimination of body waste must be done; and

e. as fatigue sets in, the stress of wearing the mask alone can become the dominant limiting factor.

3. A useful rule of thumb is to double the time normally allotted for most activities.

SECTION 5

CONDUCT

710. GENERAL

1. While NBC hazards affect the rate and frequency of activities, their impact can be lessened if NBC defensive and protective measures are applied. The battle group commander must take the necessary precautions before committing his troops.

711. CW THREAT VERSUS PROTECTION

1. It is important that the threat level be assessed correctly because of the impact on troops. Protective measures are ordered by the battle group commander based on his estimate. Various levels of protection may be ordered within the battle group area.

2. **Threat Oriented Protective Posture (TOPP) Levels**. The corresponding minimum individual and collective protection postures appropriate to the threat level are illustrated in Table 7-1.

3. **Limitations**. Prolonged wearing of CW protective clothes in "TOPP High" could adversely affect individual performance and thereby defeat the intended purpose of the clothing. Depending on the declared NBC threat level, troops are advised of the minimum acceptable wearing state of CW protective clothing ie. "TOPP Low, Medium or High". The wearing of the CW ensemble for continuous, unlimited periods in the "TOPP High" is not always required. Depending on the immediate threat, relaxation of the wearing state may be advisable or necessary. Although local commanders order the minimum level acceptable, the individual may have to adopt a higher wearing state if the situation warrants. If it is a question of wearing state prevention or heat stress casualties, it is better for commanders to opt for the former, as heat stress casualties are more likely to survive and return to duty.

THREAT ORIENTED PROTECTIVE POSTURE (TOPP) LEVELS

NBC Threat	TOPP Level(1)	Individual Protection(2)	Collective Protection
The enemy has an offensive NBC capability but there is no indication of its use in the immediate future	Low	Personnel to carry individual protective equipment (IPE) or have it readily available for wear. Eye protection as required and appropriate.	Regularly check collective protective equipment (CPE) for completeness or serviceability.
Nuclear weapons or chemical/biological weapons have been used in another area or there are strong indictions that the enemy will use these weapons in the immediate future.	Medium	Nuclear - TOPP Level Low applies. Chem/Bio - IPE worn less gloves and mask - Observe BCW Survival Rule.	Test fixed and mobile collective protection systems. Mobile units earmark locations for the installation of portable collective, systems assembly of protective shelters; erect if tactical situation permits. If possible, personnel and equipment to be kept under cover to protect against liquid contamination or fallout.
Nuclear attack or chemical/biological attack is imminent.	High(3)	Nuclear - TOPP Level Low Applies. Chem/Bio - Full IPE warn.	Put fixed and mobile collective protection system into state of readiness (including combat vehicles) and, if tactically possible, portable collective protective shelters of mobile units.

NOTE

1. The TOPP level of a particular area is decided by the appropriate commander after considering the local threat, temperature and mission/task of units concerned
2. Within each TOPP level, individual protection can be further reduced if warranted by special conditions:
    a. personnel inside combat vehicle or facilities with collective protection; and
    b. task requirements forcing reduction in heat leak.
3. A commander may order, for example, TOPP Level Medium even if the threat level ordered by higher headquarters is High. Masking is ordered when warning of arrival of chemical/biological agents, or the position is under attack.

Table 7-1 TOPP Levels

712. REPORTING AND WARNING

1. In order to be able to assess the impact of NBC attacks, commanders at all levels must be provided with timely, accurate information concerning them. To provide this information, a NBC reporting and warning organization has been established with trained and qualified personnel.

2. NBC reports will inevitably be duplicated, particularly in the case of a nuclear detonation. To avoid confusion and duplicated reporting, reports should be fully coordinated with neighboring units and formations. Sub-collection and collection centers at formation level will coordinate the NBC reporting and warning organization.

3. Unit responsibilities for reporting and disseminating NBC attacks and hazard areas should be clarified in standing operating procedures in accordance with ATP 45 which is available in all units.

713. DEFENSIVE MEASURES TO BE TAKEN BY THE BATTLE GROUP COMMANDER

1. There are several actions the battle group commander may implement to mitigate the degradation caused by remaining in an NBC environment over an extended period of time:

   a. reduce the level of individual protection consistent with the hazard, the temperature and the work rate;

   b. rotate personnel in tasks requiring heavy manual work;

   c. direct longer and more frequent rest periods to allow for dissipation of built-up body heat;

   d. use vehicles and machinery to reduce manual labour;

   e. provide an adequate water supply to permit increased water intake;

   f. devise methods to facilitate identification of personnel, their rank or appointment and their unit or sub-unit; and

   g. reduce the level of individual exposure by rotation of personnel between exposed and collective protection areas.

2. The following characteristics of protective items should be known by all troops:

   a. More than one injection of atropine - oxime will likely require medical attention.

   b. The CW ensemble does not protect against radiation. Radiation dosage must be monitored.

c. CS (riot control or vomitting agent) can disguise nerve agents. A large enough dose of CS can cause vomitting that tends to make the wearer remove his CW mask, breathe the CS/nerve gas mixture and die. Do not remove the CW mask until inside CPE (collective protective ensemble).

d. Vomitting agent cannot be detected other than by smell at this time.

e. Chlorine is an effective decontaminant. Diluted liquid chlorine can neutralize mustard droplets on face masks. It is important to decontaminate face masks promptly as mustard gas will eat through the rubber within a few hours. The CML-Bio mask can also be effectively decontaminated with fullers earth (Decon Mitt) if it is done before mustard agent soaks in. The CML-Bio mask C3 will provide six hours protection. The new mask (XC4) will give 24 hours of protection from liquid mustard.

f. Prophylaxis (bromide tablets) are given before nerve agents are expected to be used. One is taken every eight hours. They raise the 50% lethal dose level but can also cause diarrhoea.

g. Chemical agent detection paper reacts only to chemical droplets and not to vapour. Nerve agent vapour detector (NAVD) indicates if nerve agent vapour is present.

714. DECONTAMINATION EQUIPMENT

1. Below is a summary of decontamination equipment that a battle group commander may require and where it is held:

Decontamination Level	**Where Held**	**Current Equipment**
Immediate	Personal	Decon mitt
Immediate	Crew	C-1 decontaminant 1.1 imperial quart apparatus
Operational	Section	C-1, STB (super tropical bleech) decontaminant 1.1 imperial quart apparatus
Operational	Company	C-1 STB decontaminant 1.1 imperial quart apparatus
Operational	Unit	C-1 decontaminant 1.1 imperial quart apparatus
Complete	Formation	M12A1 decontaminant apparatus STB
Special		
(1) Casualty	Formation	Decontaminant mitt
(2) Laundry and dry cleaning	Formation	MLB 4
(3) Electrical and optical instruments	Formation	None
(4) Maintenance decontamination	Unit/Formation	Decontaminant mitt 1.1 litre apparatus M12A1

Table 7-2 Decontamination Equipment

SECTION 6

ADMINISTRATION

715. ADMINISTRATIVE POINTS TO CONSIDER

1. The following administrative points may be covered in orders:

   a. There may be a requirement for more frequent re-supply of NBC equipment and replacement of personnel.

   b. Increased production of potable water for normal use will be necessary.

   c. Re-assessment of transportation priorities, taking into account the need to evacuate numerous casualties and to resupply NBC stores and equipment will be needed.

   d. Equipment and vehicles may require decontamination before they can be maintained or repaired.

   e. Medical plans for evacuation and treatment may have to be re-assessed.

2. NBC protective supplies (including medical) that are necessary for individual survival for a minimum of 72 hours, are carried in first line transport when there is a threat. This is sufficient for most emergency situations when daily resupply is interrupted or stopped. Special arrangements are needed to carry extra water for consumption and decontamination.

SECTION 7

CONCLUSION

716. NUCLEAR AND BIOLOGICAL

1. The commander has little influence over the effects of nuclear and biological weapons. To avoid contamination tactical plans may have to be changed. Protective levels must be balanced against the mission, enemy, troops, and time available. Operational decisions affecting the need for speed and security, are weighed against the need for prolonged toxic hazard protection. The need for decontamination impacts on available resources and may necessitate reducing the scope of the mission, repositioning units, or early commitment of reserves. The battle group staff must learn to anticipate a contaminated area and present the commander with options that allow him to retain the initiative in battle.

(717 to 799: Not allocated)